

When Is Dawn (*aruṇa*)?

When Is Dawnrise (*aruṇuggamana*)?



Research on
Dawn (*aruṇa*) and Dawnrise (*aruṇuggamana*)
in the Pāli Texts,
with Photographs and Scientific Explanations

by
Bhikkhu Ñāṇadassana

NOTE: The Pāli Texts make a distinction between *aruṇa* and *aruṇuggamana* (lit. rise of *aruṇa* . Hereinafter, for clarity on the one hand, and for precision on the other, the standard English term 'dawn' for *aruṇa* and the non-standard 'dawnrise' for *aruṇuggamana* have been adopted. Modern Astronomy too makes distinctions by dividing 'dawn' into *astronomical dawn*, *nautical dawn*, and *civil dawn*. 'Dawnrise' in this context falls close to *civil dawn*. (Pls. see p. 105, fn. 68)

Officially approved on 25th August, 2002, by the Executive Saṅgha Committee
of the Shri Kalyāṇī Yogāshrama Sansthāva Forest Monks in Sri Lanka

'The publication of this book is to be highly regarded as very timely on a matter that was incomprehensible to many knowledgeable laypeople and monks alike. I highly value it.'

Ven. Handurumulle Sirikusala Thero, Vinaya Teacher, Sri Lanka Rāmañña Mahānikāya (Sri Lanka)

'I greatly appreciate the effort to even scientifically clarify an issue exposed to different views.'

Ven. Vilapitiye Ñāṇavaṇṣa Mahāthera, Hony Secretary of the Sri Lanka Rāmañña Mahānikāya (Sri Lanka)

'There are different opinions among monks regarding *aruṇa* and *aruṇuggamana*. I very happily express the fact that you very clearly explained how to determine *aruṇa* and *aruṇuggamana* according to the Pāli Canon and its Commentaries.'

Ven. Inguruwatte Piyanda Mahāthero, Vinaya Teacher, Vice High Priest, Hony Secretary of the Sri Lanka Swejin Nikaya, Meditation Instructor (Sri Lanka)

'It certainly sheds light on a matter about which many monks have different views and understanding. Now the meaning of *aruṇuggamana* is clear.'

Ven. Guttasila (New Zealand)

'Lucid research on *aruṇa/aruṇuggamana*. I shall peruse it with interest.'

Ven. Ñāṇaramita (Germany)

'Ven Ñāṇadassana's findings are the result of extensive and detailed study ... They are in no way his own ideas. ... He has also presented empirical data collected through direct observation So, we can agree that his findings are no mere guesswork, but are firmly based on sound investigation.'

Ven Kumara Bhikkhu, Sasanarakkha Newsletter # 6, (Malaysia)

'Certainly it will come to the attention of those monks who are interested in Vinaya matters and I'm sure that when they read it they will change their practice accordingly.'

Anandajoti Bhikkhu (UK)

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‘Is **dawn** to be known through observation or through inference?’

Here, dawn is to be known only through observation and not through inference ... because it can be ascertained after one has seen the colour of dawn with one’s eyes. ... [Afterwards] it can be known through inference, and through reasoning again and again: “If this were not, that would not occur.” ’

‘*Kiṃ paccakkhasiddho eso, udāhu anumānato?*’*ti.*

Ettha, ayaṃ aruṇo nāma paccakkhasiddho eva, na anumānasiddho ... aruṇavaṇṇo cakkhunā disvā jānitabbato. ... “Na evaṃ sati, evaṃ bhaveyyā”ti anumānena, punappunaṃ cintanena siddho”ti.’ (Vl. 1.23)

‘In determining Vinaya-issues ... one’s own opinion (*attano mati*) is the weakest authority.’

‘*Vinayavinicchaye ... attano mati nāma sabbadubbalā.*’ (VA i.230-1)

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Source References

All references to Canonical and Post-Canonical Pāli Texts are to editions of the PTS (*Pāli Text Society*, Oxford, England), whereas references to the Pāli Subcommentaries are to editions of the Burmese Chaṭṭha Saṅgāyana. For books other than Pāli (encyclopaedias, scientific books etc.) please see Bibliography (p. 123). In their case the reference is to the headword (DAWN, TWILIGHT etc.).

Canonical Texts

VINAYA PIṬAKA

Vin i	Vinaya Mahāvagga
Vin ii	" Cullavagga
Vin iii	" Suttavibhaṅga
Vin iv	" Suttavibhaṅga
Vin v	" Parivāra

SUTTA PIṬAKA

A	Aṅguttara-Nikāya
Ap	Apadāna
D	Dīgha-Nikāya
M	Majjhima-Nikāya
Miln	Milindapaṇha
Nd2	Cullanidesa
S	Samyutta-Nikāya
Sn	Sutta-Nipāta
Ud	Udāna

Post-Canonical Texts

COMMENTARIES

<i>Vinaya</i>	
VA	Vinaya-Aṭṭhakathā (Samantapasādikā)
<i>Sutta</i>	
AA	Aṅguttaranikāya-Aṭṭhakathā
ApA	Apadāna-Aṭṭhakathā
BuA	Buddhavaṃsa-Aṭṭhakathā
CpA	Cariyāpiṭaka-Aṭṭhakathā
DA	Dīghanikāya-Aṭṭhakathā
DhA	Dhammapada-Aṭṭhakathā
JA	Jātaka-Aṭṭhakathā
MA	Majjhimanikāya-Aṭṭhakathā
PvA	Petavatthu-Aṭṭhakathā
SA	Samyuttanikāya-Aṭṭhakathā
SnA	Suttanipāta-Aṭṭhakathā
ThgA	Theragātha-Aṭṭhakathā
ThigA	Therīgātha-Aṭṭhakathā
UdA	Udāna-Aṭṭhakathā
Vism	Visuddhimagga
VvA	Vimānavatthu-Aṭṭhakathā

SUBCOMMENTARIES

<i>Vinaya</i>	
Kmṭ	Khuddasikkha-Mūla- sikkha Abhinava-Ṭikā
Pyṭ	Pācīyādiyojanapāli-Ṭikā
Sbṭ	Subodhālamkāra-Ṭikā
Sdṭ	Sāratthadīpanī-Ṭikā
Vlṭ	Vinayālaṅkāra-Ṭikā
Vmṭ	Vimativinodani-Ṭikā
Vvṭ	Vinayavinicchaya-Ṭikā
<i>Sutta</i>	
Aṭ	Aṅguttaranikāya-Ṭikā
Abhṭ	Abhidhānappadīpikā-Ṭikā
Dṭ	Dīghanikāya-Ṭikā
Mṭ	Majjhimanikāya-Ṭikā
Nmṭ	Namakkāra-Ṭikā
Sṭ	Samyuttanikāya-Ṭikā

OTHER LITERATURE

Chaṭṭha Saṅgāyana ed.			
Mvṃ	Mahāvamsa	"	"
Tvṃ	Thūpavamsa	"	"

Pāli Dictionaries

Abhp	<i>Abhidhānappadīpikā</i> , W. Subhūti, Colombo, Mahā Bodhi Printing Works, 1921
Abhps P.E.D.	<i>Abhidhānappadīpikā-Sūci</i> (key), W. Subhūti, Colombo, 1893 <i>Pāli English Dictionary</i> , PTS.

Pāli Grammar Books

Dhtm.	<i>Dhātumañjūsā</i>
Dhtp.	<i>Dhātupāṭha</i>
Kac	<i>Kaccāyana-vyākaraṇa</i>
Nir	<i>Niruttipanī</i> , Burmese Chaṭṭha Saṅgāyana edition
Sdn	<i>Saddanītippakaraṇa</i> , Burmese Chaṭṭha Saṅgāyana edition

Technical Terms Abbreviated in Text

alt.	altitude	long.	longitude
lat.	latitude	v.	verse

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Preface

The material for this paper was initially compiled for personal use only, and was not at all meant for publication. Other monks, however, evinced such an interest in the material, and made such requests for it to be published, that publication became almost a bounden duty.

The research for this paper has taken more than five years to complete. It has comprised:

- study of pertinent Pāli Texts, Canonical and Post-canonical;
- study of other pertinent literature, ancient and modern, of East and West, including authoritative, standard encyclopaedias and navigation handbooks;
- collection of empirical data through direct observation of the sky at the small hours of the morning till sunrise, at points in Sri Lanka: twice on the south-eastern coast, once at high altitude, and once on the north-eastern coast;
- verification of the empirical data, kindly assisted by the staff at the Department of Meteorology, Colombo, Sri Lanka; and
- collection of empirical data from other monks, and a newspaper reporter.

No attempt has been made to validate or invalidate any tradition. The paper is presented for the individual reader to decide for himself.

It is a fundamental principle of guidance for those who study and make research and statements about a religious teaching and practice, that the statements they make can be confirmed by that religion's authoritative Texts, and that they can when possible be validated also by facts. This fundamental principle has been observed throughout this paper. The material is, therefore, basically only authoritative Pāli Texts, and data and pictures obtained from direct observation of dawn (*aruṇa*) and dawnrise (*aruṇuggamana*)¹

¹ The Pāli Texts make a distinction between *aruṇa* and *aruṇ'uggamana* (lit. rise of *aruṇa*). Hereinafter, for clarity on the one hand, and for precision on the other, the standard English term 'dawn' for *aruṇa* and the non-standard 'dawnrise' for *aruṇuggamana* have been adopted. Modern Astronomy too makes distinctions by dividing 'dawn' into *astronomical dawn*, *nautical dawn*, and *civil dawn*. 'Dawnrise' in this context falls close to *civil dawn*. (Pls. see p. 105, fn. 68)

What the Pāli Texts reveal and the direct observations verified is:

- **Dawn** (*aruṇa*) is the red radiance of the sun, which appears on the eastern horizon before sunrise.
- At this time darkness still prevails in the quarters, and there is no visibility on land.
- **Dawnrise** (*aruṇuggamana*), which is the **actual offence criterion** for many rules in the Vinaya-Piṭaka, is the red radiance at its height, when the ‘head’ (*sīsa*) of dawn rises.
- At this time the night becomes light (*ratti vibhāyati*), the four quarters become white (*odāta-disā*), and there is considerable visibility on land. Natural light (*āloka*) surrounds the observer who is out of doors, to such a degree that there is considerable visibility close at hand: he can see a path, foot-prints, can distinguish between colours, between the rigidity or softness of objects, and so forth.
- Dawnrise (*aruṇuggamana*) marks the end of the entire night (darkness) and the beginning of day (light) before sunrise.
- The time of dawnrise, as also of sunrise, differs from country to country, from region to region within a country, as well as from day to day within a region. The determining criteria for the time of dawnrise, however, are: ‘the four quarters becoming white’ and ‘the beginning of considerable visibility’. In Sri Lanka, for example, dawnrise occurs usually 30 minutes before sunrise.

Chapter I discusses the definition, etymology, colour, shape, time, and quarter of ‘dawn’ (*aruṇa*) as they are found in the Pāli Texts. The times and data from formalized observations follow, and verification by the Department of Meteorology, Colombo, Sri Lanka.

Chapter II discusses the distinction between ‘dawn’ (*aruṇa*) and ‘dawnrise’ (*aruṇuggamana*) as it is found in the Pāli Texts, and shows that in terms of Vinaya it is not ‘dawn’ (*aruṇa*) but ‘dawnrise’ (*aruṇuggamana*) to be taken into consideration, as ‘dawnrise’ is the **actual offence criterion** for many rules in the Vinaya-Piṭaka.

Chapter III discusses the issue at hand, namely the distinctive features of ‘dawnrise’ (*aruṇuggamana*).

Chapter IV discusses the striking differences between ‘dawnrise’ and ‘non-dawnrise’, and makes thus a sharp distinction between ‘what is’ and ‘what is not dawnrise’.

Chapter V discusses how dawnrise (*aruṇuggamana*) is, as an offence criterion, the dividing-line between proper and improper time for eating (*kāla-/vikāla-bhojana*),

and how it applies to the Vinaya (monastic rule) by examining Pāli Texts with particular reference to those times for eating.

Chapter VI discusses how dawnrise (*aruṇuggamana*) is, as the distinctive radiance of the sun, the dividing-line between night and day, and gives an overview and discussion of Pāli terms that refer to the main divisions of night and day by which a monk regulates his daily life.

Chapter VII discusses the general physical laws that govern the atmospheric phenomenon of *dawn*, *dawnrise* etc. This is followed by a discussion of the empirical observations of Chapters I and III from within the scientific framework: the conclusion being that *dawnrise* (*aruṇuggamana*) falls within the interval known in meteorology as *morning twilight*, and more precisely close to *civil twilight* or *civil dawn*.

Chapter VIII is a brief conclusion that summarizes the chief points of this paper; comparing dawn (*aruṇa*) and dawnrise (*aruṇuggamana*).

ACKNOWLEDGEMENTS

May the people who have rendered direct and indirect assistance towards the research, composition and completion of this paper, by their merit, become rid of all misperceptions and doubts about Vinaya and Dhamma theory and practice, and realize the stable state (*acalaṭṭhāna*), Nibbāna.

Special merit deserve the scientists Mr. T. K. Fernando and Mr. G.B. Samarasinghe, Deputy Directors, and their staff at the Department of Meteorology, Colombo, Sri Lanka; and all the donors, without whose contribution this book would not be published.

Bhikkhu Ñāṇadassana (Greece)
Dharmāyatana
Mītirigala
Sri Lanka

Introduction

Why was the research for this paper undertaken?

There are today a number of different and even conflicting perceptions of what constitutes ‘dawn’ (*aruṇa*) and ‘dawnrise’ (*aruṇuggamana*). So much so, that many monks cannot but have doubts about which interpretation of these terms corresponds to the actual phenomenon of dawnrise as understood by The Buddha and his audience, and hence which interpretation secures an observance of the Vinaya proper.

The research for this paper was undertaken in view of this precarious state of affairs. Or, as the Subcommentary *Vinayāḷankāra* puts it:

‘Why is this subject of dawn under discussion? Due to its wide range. How? Men and women lay followers (*upāsakā/upāsikā*) who undertake the Observance (*Uposatha*) and do not know **dawnrise**¹ (*aruṇuggamana*) as it really is, thinking that dawn has arisen when it has not, they eat solid or soft food, use garlands, scents etc. and by that their virtue (*sīla*) breaks. Likewise, novices (*sāmaṇeras*) eat at the improper time (*vikāla*) and incur loss of virtue (*sīlavināsa*). Bhikkhus under *nissaya* travel without their teachers or preceptors outside their monastery precincts (*sīma*) and incur breach of their *nissaya*. Bhikkhus who leave the monastery precincts during the rains-retreat incur interruption of their rains-retreat. Bhikkhus who owe to have their three robes with them [at dawnrise] incur *nissaggiya-pācittiya* offences by being absent from one of their three robes within an unbound monastery precinct (*abaddhasīmā*). Likewise within a *sattabbhantara* monastery precinct. If they sleep under the same roof with persons without

‘*Kasmā pana imasmiṃ thāne aruṇakathā vuttā’ti? Imissā aruṇakathāya mahāvisa-yabhāvato. Kathaṃ? Uposathikā upāsakā ca upāsikāyo ca aruṇuggamanaṃ tathato ajānantā anuggateyeva aruṇe uggata-saññāya khādanīyaṃ vā khādanti, bhojanīyaṃ vā bhuñjanti, mālāgandhādīni vā dhārenti. Tato tesaṃ sīlaṃ bhijjati. Sāmaṇerā tatheva vikālabhojanaṃ bhuñjivā sīlavināsaṃ pāpuṇanti. Nissayapaṭi-pannakā bhikkhū ācariyupajjhāyehi vinā bahisīme carantā nissayappassambhanaṃ pāpuṇanti; antovasse bhikkhū upacāra sīmato bahi gacchantā vassacchedaṃ; tecīvarikā bhikkhū abaddhasīmāyaṃ cīvarena vippavasantā nissaggiya-pācittiyaṃ; tathā sattabbhantarasīmāyaṃ; sahaseyyappahonakaṭṭhāne anupasampannamātugāmehi saha sayantā pācittiyaṃ; tathā yāvakālikaṃ bhuñjantā bhikkhū; pārivāsikādayo vattaṃ nikkhipantā ratticchedaṃ. Evamādi-ane-kādīnavasambhavato lajjipesalānaṃ bhikkhūnaṃ tathato aruṇuggamanaṃ jānanatthaṃ vuttā’ti daṭṭhabbā.’* (Vñ 1.24)

¹ All emphases in quotations are the author’s.

higher ordination (*anupasampanna*) or with women, they incur *pācittiya* offences. Likewise bhikkhus who consume things at the improper time (*vikāla*) that should be consumed at the proper time (*kāla*). Those who are under probation (*parivāsa*) etc. and postpone their observance (*vatta*) incur interruption of nights (*ratticcheda*). Hence, because of these and many other disadvantages, the topic is under discussion for conscientious and virtuous bhikkhus to know **dawnrise** (*aruṇuggamana*) as it really is.’

May wise monks therefore reflect again and again on what is said first and what next, and not confuse things. May they, having done so, become rid of misperceptions and doubts about *aruṇuggamana*-related offences and gain confidence. For, whether or not he is in doubt, the monk who unintentionally sees ‘non-dawnrise’ as dawnrise is faced with a serious problem. In the Vinaya rules with dawnrise as an offence criterion, the offence is neither mitigated nor invalidated by mistaken perception (*saññā*) of the correct/incorrect time of dawnrise, nor by doubt (*vimati*) about it. The offences are all *acittaka* (without intent) and *nosaññāvimokkha* (with no mitigation by misperception).² This means that the offence is effective regardless of whether the monk violates the rule without intent or through ignorance, through mistaken perception or through doubt. An example of this principle is the rule regarding *vikāla-bhojana* (eating at the improper time):

‘Improper time (*vikālo*) means: when noon has passed **till dawnrise** (*yāva aruṇuggamanā*).

‘*Vikālo nāma: majjhantike vītivatte yāva aruṇuggamanā.*

Should he perceive it as the proper time (*kālasaññī*), when it is [in fact] the improper time (*vikāla*), and eats, he falls into an offence of expiation (*pācittiya*).

Vikāle kālasaññī ... bhuñjati āpatti pācittiyāssa.”

Should he perceive it as the improper time (*vikālasaññī*), when it is [in fact] the proper time (*kāla*), he falls into an of-

Kāle vikālasaññī āpatti dukkaṭassa.’
(Vin iv.86)

²Please see Vin v.116, 124, 207.

fence of wrongdoing (*dukkata*).’

Here, the monk has fallen into the offence even though he did not realize it was improper/proper time, and did not intend to commit the offence. This type of offence is thus *acittaka* (without intent) and *nosaññāvimokkha* (with no mitigation by misperception), because for the monk to have fallen into the offence, he needs neither have intended to commit the offence, nor needs his perception of committing the offence have been clear and correct. His action alone, here that of eating, means that he has fallen into the offence. The same holds true in the case of being in doubt (*vematiko*):

‘Should he at the improper time (*vikāla*) be in doubt (*vematiko*) [about the time], and eats ... he falls into an offence of expiation.

‘*Vikāle vematiko ... bhuñjati āpatti pācittiyassa.*

Should he at the proper time (*kāla*) be in doubt (*vematiko*) [about the time], he falls into an offence of wrongdoing.’

Kāle vematiko āpatti dukkaṭassa.’ (Ibid.)

To repeat: the offence criteria of ‘proper time’ (*kāla*), and ‘improper time’ (*vikāla*), which are both determined by ‘dawnrise’ (*aruṇuggamana*), belong to the *acittaka* (without intent) type of offence criteria: the monk falls into the offence regardless of his perception, regardless of his intent, and regardless of whether he is in doubt. His action alone means that he has fallen into the offence. This absolute principle applies with equal force even to the purification procedures for *Parivāsa* and *Mānatta*: the purification is in such a case rendered simply invalid.

May those who cherish the Vinaya, therefore, know correctly and with certainty ‘what is dawn’ (*aruṇa*), ‘what is dawnrise’ (*aruṇuggamana*), and hence ‘what is proper time’ (*kāla*) and ‘what is improper time’ (*vikāla*).

‘*Visuddhatthāya sīlassa - bhikkhūnaṃ piyasīlinaṃ
Katāruṇakathā esā - na sārambhādikāraṇā.
Tasmā suṭṭhūpadhāretvā - yuttaṃ ganhantu sādhave.
Ayuttañca chaḍḍhayantu - mā hontu dummanādayo’ti.*’ (Vl 1.31)

‘For the purification of virtue - of bhikkhus with pleasing conduct,
Is this subject on dawn under discussion - and not for the sake of quarrelling etc.
Let good people, therefore, consider it carefully - and accept what is befitting.
Let them dismiss what is unbecoming - and not be displeased etc.’

Cakkumantu dakkhantu
(May those who have eyes see)

PART ONE

When Is Dawn (*aruṇa*)?

Chapter I

The Phenomenon of Dawn (*aruṇa*)

The *Vinayāḷankāra*, a Vinaya Subcommentary, that discusses Pāli Texts with regard to a number of issues, says about dawn (*aruṇa*):

[Introduction]

In order to dispel any doubts regarding **dawnrise** (*aruṇuggamana*) the subject of **dawn** (*aruṇa*) should be discussed. Here it is asked:

- What is dawn (*aruṇa*)?
- Why is it called dawn (*aruṇa*)?
- What is its colour?
- What is its shape?
- At what time, and in which quarter does dawn (*aruṇa*) arise?
- Is it to be known through observation or through inference?

‘Aruṇuggamane saṃsayavinodanattaṃ aruṇakathā vattabbā. Tatridaṃ vuccati:

*Ko esa aruṇo nāma?
Kena so aruṇo bhava?
Kīdiso tassa vaṇṇā tu?
Saṅṭhānaṃ kīdisaṃ bhava?
Kismiṃkāle ca dese ca
Aruṇo samugacchati?
Kiṃ paccakkhasiddho eso,
Udāhu anumānato’ti?*

[Definition]

What is dawn (*aruṇa*)? Here, dawn (*aru-ṇa*) is the distinctive radiance of the sun. For it is defined in the *Abhidhānapadī-pika* [dictionary] thus: “Dawn is the glow that rises before sunrise.” And in its Subcommentary too: “Dawn is the glow that rises before sunrise.” And in the Vinaya Subcommentary called *Vimativinodanī*: “Here, dawn should be understood as the distinctive radiance of an increasingly intense red that precedes sunrise.”

One should therefore understand that dawn is only the sun’s radiance, and nothing else.

Tattha, ko esa aruṇo nāmā?’ti Ettha, esa aruṇo nāma sūriyassa pabhāviseso. Vuttañhettaṃ Abhidhānapadīpikāyaṃ [v.65]: “Sūrassodayato pubbuṭṭhitaraṃsi siyāruṇo’ ti.” Taṭṭikāyaṅca [Abhpt 57]: “Sūrassa udayato pubbe uṭṭhitaraṃsi aruṇo nāma siyā’ti.” Vimativinodanīnāmikāyaṃ Vinayaṭṭikāyaṅca [1.463]: “Aruṇo’ti cettha sūriyuggamanassa purecaro, vaḍḍhana-ghanaratto pabhāviseso’ti daṭṭhabbo’ti”, vut-taṃ.

Tasmā sūriyappabhāyeva aruṇo nāma, na añño’ti daṭṭhabbaṃ.

[Etymology]

Why is it [dawn] called *aruṇa* (dawn)?

Here, it has the colour of *aruṇa* (dawn), that is why it is called *aruṇa* (dawn). This means that it contains some red colour. Or, [that] it proceeds (*arati*), goes (*gacchati*), moves (*pavattati*) with redness, that is why it is called *aruṇa* (dawn). For it is said in the *Abhidhānappadīpika Subcommentary*: “It proceeds (*arati*), goes (*gacchati*) with the colour of *aruṇa* (dawn), that is why it is called *aruṇa* (dawn).”¹

Kena so aruṇo bhava?’ti Ettha, aruṇo vaṇṇo assā’ti aruṇo. Kiñci rattavaṇṇasamannāgato’ti attho. Atha vā, arati, gacchati, ratta-vaṇṇa-bhāvena pavattati’ti aruṇo. Vuttañhetam Abhidhānappadīpika-ṭīkāyaṃ [57]: “Arūṇa-vaṇṇatāya arati, gacchati’ti aruṇo’ti.” (Vlt 1.21)

Thus,

‘**Arūṇa** [comes from] *ara*, in the sense of going [and the suffix] *uṇe*.’

‘**Arūno**’*ti ara gamane, uṇe.*’
(Dhtm) in Abhps 26

[Colour]

‘What is its [dawn’s] colour? Here, its colour may be a dim red. For the *Abhidhānappadīpika* [dictionary] says: “Dawn is a light red.” And its Subcommentary: “Dawn is a light, dim red, like the eyes of a fish.” Or, as stated in the *Vimativinodanī*: “a distinctive radiance of an increasingly intense red.”

‘Kūḍiso tassa vaṇṇo?’ti Ettha, abyattarat-tavaṇṇo tassa vaṇṇo bhava. Vuttañhi Abhidhānappadīpikāyaṃ [v.97]: “Arūṇo kiñci ratto’tā’ti.” Taṭṭīkāyañca [Abhpt 57]: “Kiñci ratto abyatta-ratta-vaṇṇo aruṇo nāma, yathā macchassa akkhī’ti.” Vimativinodaniyañca [1.463]: “Vaddhanaghana-ratto pabhāviseso’ti.” (Vlt. 1.21)

Thus,

‘In the range of colour tones, dawn goes from a dim red to a blood red.’¹

‘*Arūṇo raṃsibhede c’āvyattarāge ca lohite.*’
(Abhp v.980)

The *Jātaka Commentary* describes, besides, the beauty of this redness:

‘At the end of the night ... when dawn | *Rattipariyosāne ... aruṇe uggate ... pu-*

¹ Dawn assumes many tones of red because, ‘The presence of clouds, especially, can produce spectacular effects, as when the sun illuminates the underside of a cloud layer with a rich red colour.’
(*The Encyclopedia Americana*)

(*aruṇa*) arises, the eastern quarter appears to have a form so glorious, due to the beauty of its **redness**.²

ratthimā disā ratta-suvaṇṇatāya² uttamarūpadharā hutvā dissatī'ti. (JA v.403)

‘One should, therefore, understand that dawn (*aruṇa*) is only the **red radiance** of the sun, and **not a white** radiance and so forth.³

'Tasmā sūriyassa ratta-ppabhā yeva aruṇo nāma, na seta-ppabhādayo'ti daṭṭhabbaṃ.

[Shape]

What is its [dawn's] shape? Here, dawn (*aruṇa*) does not have a particular shape as such, because it consists of only rays. It should be understood that as far as it spreads, so is its shape. Or, its shape is that of the eastern quarter, for in the *Jātaka Commentary* it is said: “At the end of the night ... when dawn arises ... the eastern quarter appears to have a form so glorious, due to the beauty of its redness.”

Sanṭhānaṃ kīdisaṃ bhava?'ti Ettha, aruṇassa pāṭekkaṃ sanṭhānaṃ nāma natthi, rasmimattattā. Yattakaṃ padesaṃ pharati, tattakaṃ tassa sanṭhānan'ti daṭṭhabbaṃ. Atha vā, puratthimadisāsanṭhānaṃ, vuttaṃ hi Jātakaṭṭhakathāyaṃ [JA v.403]: “Rattipariyosāne ... aruṇe uggate ... puratthimā disā rattasuvaṇṇatāya uttamarūpadharā hutvā dissatī'ti.”

[Time and Quarter]

At what time, and in which quarter does dawn (*aruṇa*) arise? Here, dawn rises at the time before sunrise in the eastern quarter. For it is said in the *Udāna Commentary*: “Dawn is the luminosity that rises in the eastern quarter, earlier than sunrise.” And in the *Abhidhānappadīpika* [dictionary]: “Dawn is the glow that rises before sunrise.”³

Kismiṅca kāle ca dese ca aruṇo samug-gacchati?'ti Ettha, esa aruṇo suriyuggamanassa pure kāle puratthimadisāyaṃ uggacchati. Vuttañhettaṃ Udānaṭṭhakathāyaṃ [124]: “Aruṇo nāma puratthimadisāyaṃ suriyadayato puretarameva uṭṭhitobhāso'ti.” Abhidhānappadīpikāyañca [v.65]: “Sūrassodayato pubbuṭṭhitaramsi siyāruṇo'ti.” (Vlt. 1.23)

² Sinhalese version. The Burmese says *ratta-vaṇṇatāya*.

³ Vedic and Sanskrit literature too refer to the **redness** of dawn (*aruṇa*): ‘[Vedic *aruṇa* (adj.) of the colour of fire, i.e. ruddy, nt. the dawn ... Sk. aruṣa reddish].’ (PED) ‘In Vedic times the light of dawn was deified as *Uśas*.’ (*Sinhala Vishvakoshaya*) ‘*Uśas* ... is borne on a shining car drawn by ruddy steeds which represent the *red* rays of morning.’ (*A Vedic Reader*) Sinhalese Dictionaries too refer to the redness of dawn (*aruṇa*).

And in the *Dīgha-nikāya Subcommentary* too: ‘Dawn is the glow that rises at the period before sunrise.’

Dīghanikāyaṭīkāyañca: ‘Aruṇo’ ti suriyassa udayato pubbabhāge uṭṭhitaraṃsi.’
(Dṭ 1.160)

[Dawn to Be Known through Observation]

‘Is dawn to be known through observation or through inference?’ Here, dawn is to be known only through observation and not through inference ... because it is to be ascertained after one has seen the colour of dawn with one’s eyes. ... [Afterwards] it is to be known through inference, and through reasoning again and again: “If this were not, that would not occur.”

Wise [monks] should reflect well on these questions and answers and understand and bear in mind that **dawn** (*aruṇa*) is only **red** luminosity.’

‘Kiṃ paccakkhasiddho eso, udāhu anumānato?’ ti Ettha, ayaṃ aruṇo nāma paccakkhasiddho eva, na anumānasiddho ... aruṇavaṇṇo cakkhunā disvā jānitabbato. ... “Na evaṃ sati evaṃ bhaveyyā’ ti”, anumānena, punappunaṃ cintanena siddho’ ti.

Imaṃ pañha-vissajjanaṃ sādhuṃ manasikarivā paṇḍitehi rattobhāsoyeva aruṇo’ ti paccetabbo, sallakkhetabbo’ ti.’
(Vṭ 1.23)

Following the recommendation given above, the author of the present paper watched, on a number of occasions, the night sky at the small hours of the morning till sunrise. Formalized observations were also made, the data and images of which follow:

Direct Observation of Dawn (*aruṇa*)

Three formalized observations of dawn were made:

- (1) At Nimalava Forest Hermitage, south-eastern coast of Sri Lanka, by the author.
- (2) On Sri Lanka's second highest mountain, Adam's Peak (*Siri Pada*), south-central Sri Lanka, by the author and others.
- (3) At Trincomalee, north-eastern coast of Sri Lanka, by the author and a Mahāthera.

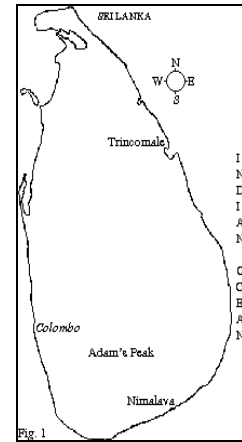
(1)

Date: 28th-31st December, 1994

Location: Nimalava Forest Hermitage, Kirinda, south-eastern coast, Sri Lanka

Prospect: Eastern night sky

Comments: The light before **dawn** (*aruṇa*), and half-an-hour after **dawn**, is so dim that only a sophisticated camera can capture it. Since such a camera was not at hand on this date, handmade pictures depicting the various stages were made. It must be noted, besides, that the times given in this paper are 'old' Sri Lanka Standard Time (i.e. GMT +5.30 hrs), and not 'new' Daylight Saving Time (GMT +6.00 hrs).



Handmade Pictures

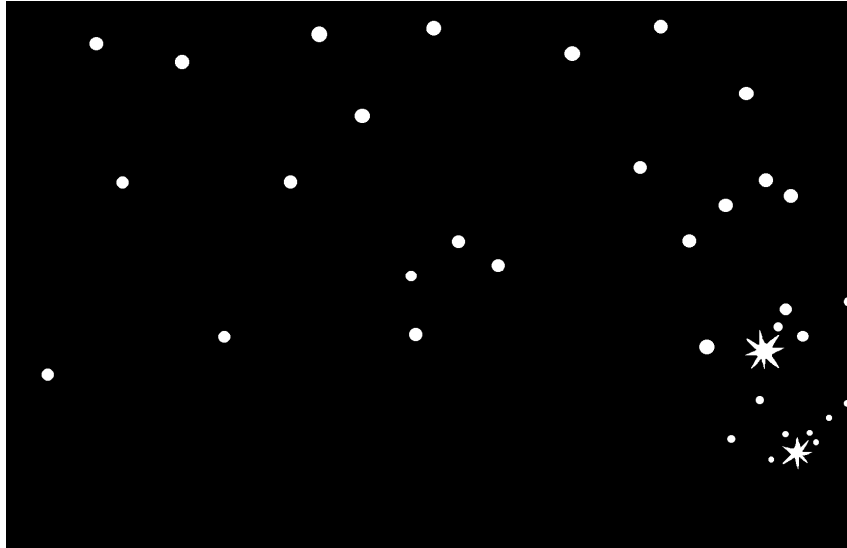


3.00 a.m.

Venus is, as the brightest star, in a cluster of fainter stars, on the right part of the eastern sky.

The horizon is not visible.

Fig. 2



4.00 a.m.
Mercury rises on the right part of the eastern sky. Venus is now higher. The horizon is not visible.

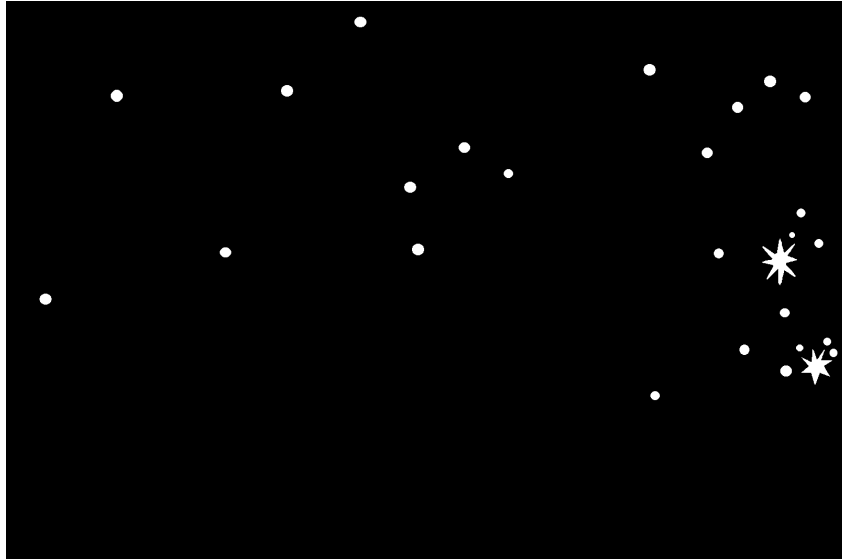
Fig. 3



4.30 a.m.
A last faint star rises on the horizon. Venus and Mercury are higher than before. The horizon is not visible.

Fig. 4

I - The Phenomenon of Dawn (*aruṇa*)



4.30- 5.00 a.m.
No more stars rise
on the horizon.
The horizon is not
visible.

Fig. 5



5.05 a.m.
White light appears
in the centre of the
eastern horizon.
The horizon is only
dimly visible.

Fig. 6

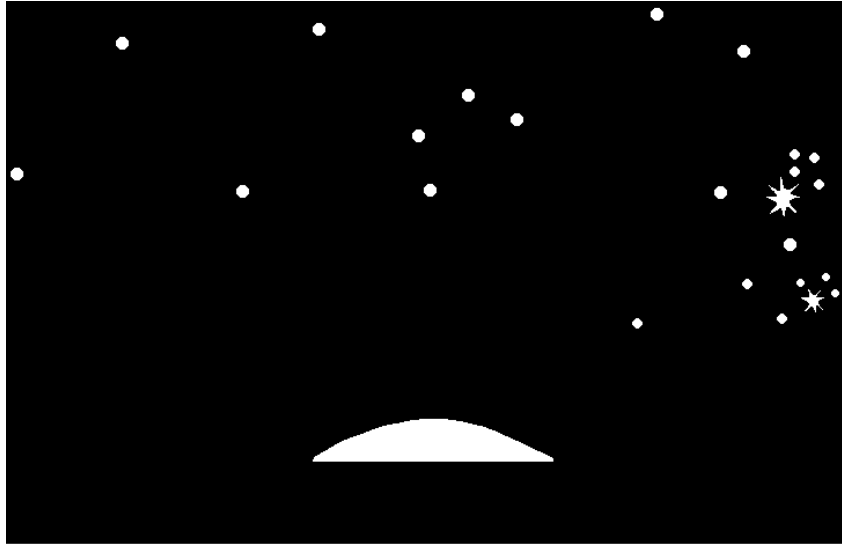


Fig. 7

5.10 a.m.

The white light increases slightly. The horizon is only dimly visible.

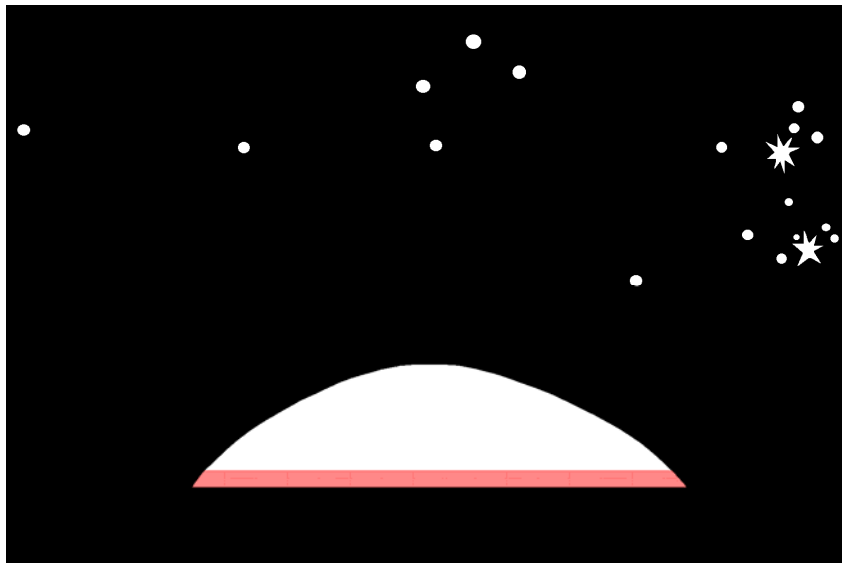


Fig. 8

5.15 a.m.

The white light increases further. A band of **dim red** (*aruṇa* (dawn)) appears in the centre of the eastern horizon.

The horizon is only dimly visible.

It is at 5.15 a.m. (10 min. after the white light), that the features of *aruṇa* (dawn = **dim red**), described in the Pāli Texts above, display themselves in the eastern quarter, before sunrise. In the surroundings it is still night; dark as at midnight.

From this time onwards the band of **dim red** (*aruṇa* (dawn)) increases progressively in intensity and volume and spreads mainly horizontally. The white light too increases further. The pictures below depict those stages.

I - The Phenomenon of Dawn (*aruṇa*)



Fig. 9

5.20 a.m.

The white light increases further.

The band of **dim red** (*aruṇa*)

(**dawn**) turns into a moderate pink, which becomes slowly **red**.

The horizon is only dimly visible.

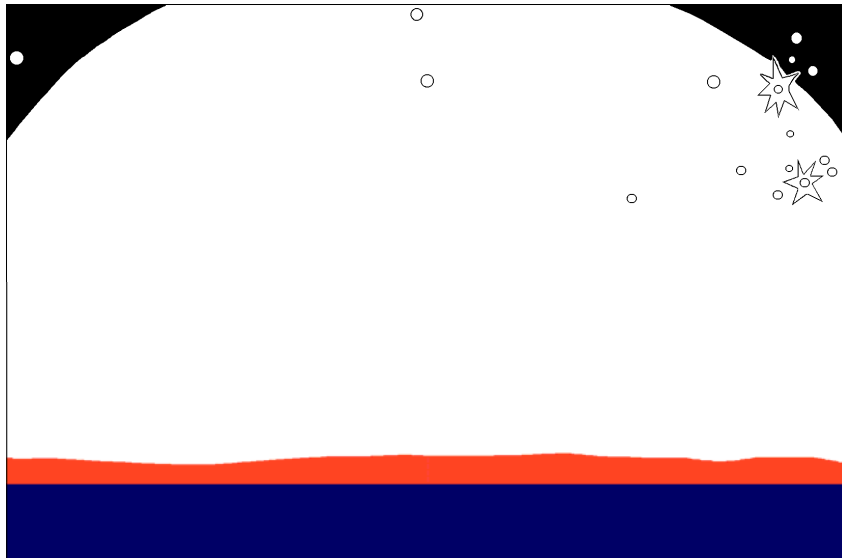


Fig. 10

5.30 a.m.

The white light spreads over almost the whole eastern quarter. Faint stars are dimly visible in the sky overhead.

The band of **red** increases in intensity and volume and spreads mainly horizontally.

The horizon is visible but not sharp. The sea appears in dark blue.

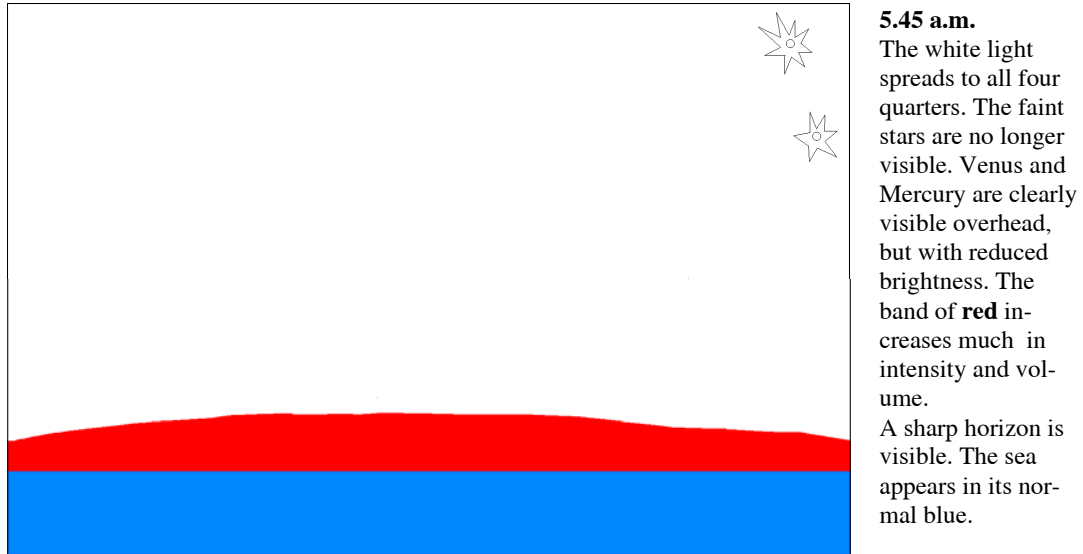


Fig. 11

5.45 a.m.

The white light spreads to all four quarters. The faint stars are no longer visible. Venus and Mercury are clearly visible overhead, but with reduced brightness. The band of **red** increases much in intensity and volume.

A sharp horizon is visible. The sea appears in its normal blue.

5.45 a.m. onwards:

- i) The white light has spread to all four quarters (the eastern, southern, western, and northern quarters) due to the spread of sunlight.
- ii) The **red** becomes intense, has spread to cover the whole eastern horizon, and does not rise further. It has reached its culmination.
- iii) Objects on land can be seen. Even the leaves on trees can be discerned.
- iv) The singing not of one or two, but of many birds in the forest can be heard. Monkeys concealed in the foliage awake now, and their movements and calls can be heard.
- v) Gradually it becomes more and more light.
- vi) The sun rises at 6.20 a.m.

Official verification of the above times and data was sought by consulting the staff at the Department of Meteorology, Colombo, Sri Lanka, the results of which follow.

Verification of Data

According to the Department of Meteorology, Colombo, Sri Lanka, the first white light that appears in the morning night sky (cf. Fig.6 above) is in meteorological terms called the beginning of *Morning Astronomical Twilight* (cf. Table I below). The official times given by the Department of Meteorology show that on 28th December, 1994, the first white light (*Morning Astronomical Twilight*) appeared at 5.05 a.m. (cf. Table I below). This tallies with the direct observations (cf. Fig.6 above).

I - The Phenomenon of Dawn (*aruṇa*)

The official times for *Morning Astronomical Twilight* (the first white light) and for sunrise over a year in Sri Lanka are given below (Table I):

Table I Morning Astronomical Twilight (TW1) and Sunrise in Sri Lanka

DATE	TW1	SUNRISE	DATE	TW1	SUNRISE	DATE	TW1	SUNRISE
December			April			July (cont'd)		
28	5:05	6:20	1	4:59	6:09	26	4:50	6:04
29	5:06	6:21	3	4:58	6:08	31	4:51	6:04
30	5:06	6:21	5	4:57	6:07	August		
31	5:07	6:22	7	4:56	6:06	5	4:52	6:05
January			9	4:55	6:05	12	4:53	6:05
1	5:07	6:22	11	4:54	6:04	September		
3	5:08	6:22	12	4:53	6:04	8	4:52	6:02
5	5:09	6:23	14	4:52	6:03	16	4:51	6:01
7	5:10	6:24	16	4:51	6:02	23	4:50	6:00
9	5:11	6:25	18	4:50	6:01	30	4:49	5:59
12	5:12	6:26	20	4:49	6:00	October		
14	5:13	6:27	22	4:48	6:00	6	4:48	5:58
17	5:14	6:27	25	4:47	5:59	14	4:47	5:57
20	5:15	6:28	27	4:46	5:58	November		
24	5:16	6:29	29	4:45	5:57	11	4:48	6:00
29	5:17 *	6:29	May			17	4:49	6:02
31	5:17	6:29	1	4:44	5:57	21	4:50	6:03
February			4	4:43	5:56	25	4:51	6:04
1	5:17	6:29	7	4:42	5:55	28	4:52	6:06
18	5:17	6:27	10	4:41	5:55	December		
19	5:16	6:27	13	4:40	5:54	1	4:53	6:07
24	5:15	6:25	17	4:39	5:54	3	4:54	6:08
28	5:14	6:24	23	4:38 +	5:53	6	4:55	6:09
March			31	4:38	5:53	8	4:56	6:10
2	5:13	6:23	June			10	4:57	6:11
5	5:12	6:22	1	4:38	5:53	12	4:58	6:12
7	5:11	6:21	13	4:39	5:55	15	4:59	6:14
10	5:10	6:20	19	4:40	5:56	17	5:00	6:15
12	5:09	6:19	24	4:41	5:57	19	5:01	6:16
14	5:08	6:18	28	4:42	5:58	21	5:02	6:17
17	5:07	6:16	July			23	5:03	6:18
19	5:06	6:15	2	4:43	5:59	25	5:04	6:19
21	5:05	6:14	5	4:44	6:00	27	5:05	6:20
23	5:04	6:13	9	4:45	6:01	29	5:06	6:21
25	5:03	6:12	12	4:46	6:01	31	5:07	6:22
27	5:02	6:11	15	4:47	6:02			
29	5:01	6:10	19	4:48	6:03			
30	5:00	6:10	23	4:49	6:04			

Fig. 12

ALL TIMES ARE IN SRI LANKA STANDARD TIME (GMT +5.30 hrs)
 TW1 = BEGINNING OF MORNING ASTRONOMICAL TWILIGHT
 DEPARTMENT OF METEOROLOGY, COLOMBO, SRI LANKA
 Courtesy: Dept. of Meteorology, Colombo

OFFICIAL TIMES

I. According to the above official times, **Morning Astronomical Twilight** (the first white light) begins over a year in Sri Lanka:

- * At the latest at 5.17 a.m. (Jan.29 - Feb.18); 1hr 12 min. before sunrise.
- + At the earliest at 4.38 a.m. (May 23 - Jun.01); 1hr 15 min. before sunrise.

According to the observations (Figs.2-5), there is complete darkness before *Morning Astronomical Twilight*. Only one colour can be seen on the horizon, namely, black.⁴

EXTRAPOLATED TIMES

II. According to the observations (Fig.8), the **dim red (*aruṇa* (dawn))** of the Pāḷi Texts, begins 10 min. after *Morning Astronomical Twilight* (the first white light). Extrapolated from the official times, the time for *aruṇa* (dawn) over a year in Sri Lanka is therefore:

- At the latest at 5.27 a.m. (Jan.29 - Feb.18); 1hr 02 min. before sunrise.
- At the earliest at 4.48 a.m. (May 23 - Jun.01); 1hr 05 min. before sunrise.

III. According to the observations (Fig.11), the **intense red** begins 40 min. after *Morning Astronomical Twilight* (the first white light). Extrapolated from the official times, the time for the **intense red** over a year in Sri Lanka is therefore:

- At the latest at 5.54-5.59 a.m. (Jan.29 - Feb.18); 30-35 min. before sunrise.
- At the earliest at 5.18-5.23 a.m. (May 23 - Jun.01); 30-35 min. before sunrise.

OFFICIAL TIMES

IV. According to the above official times, **sunrise** begins over a year in Sri Lanka:

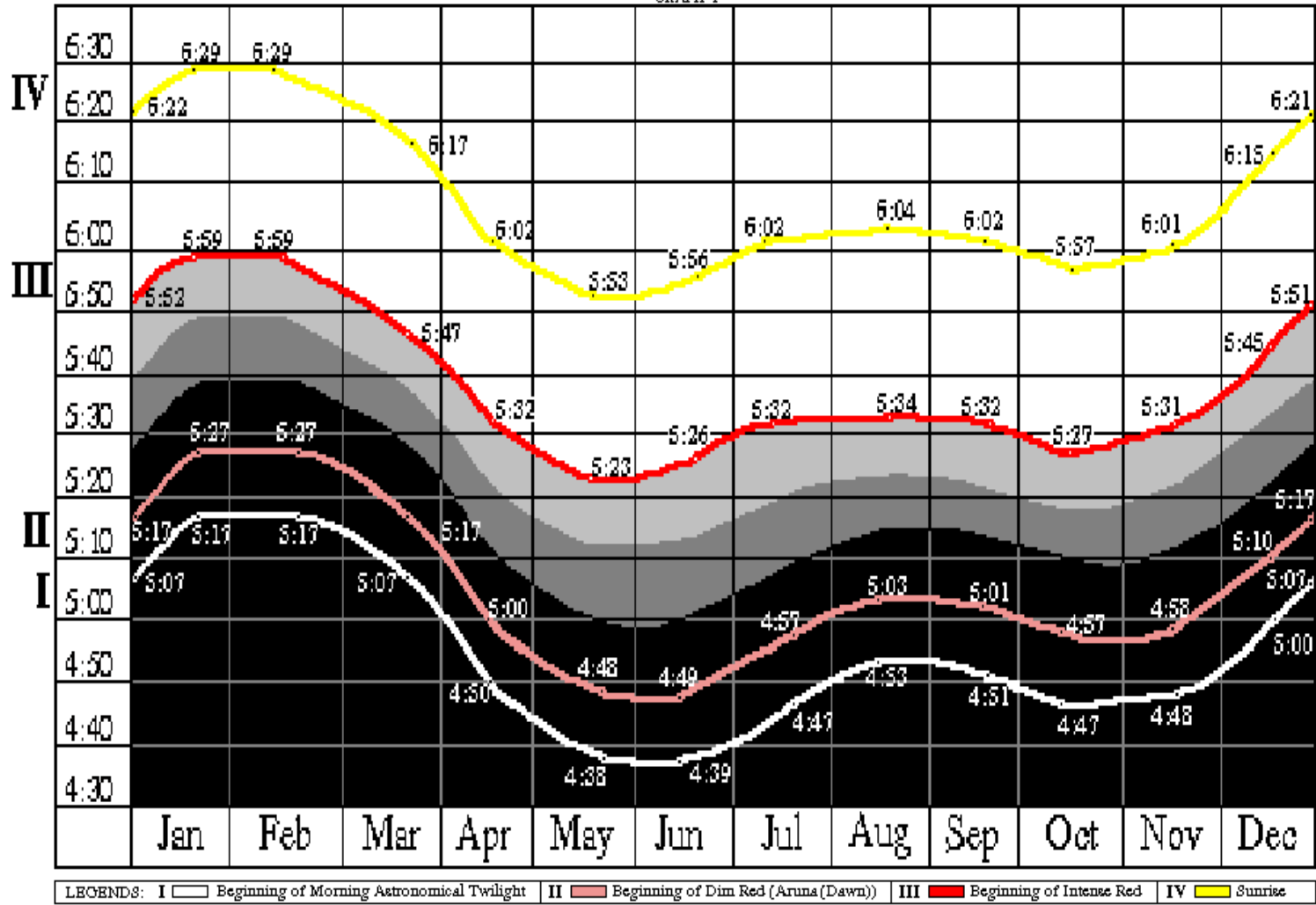
- At the latest at 6.29 a.m. (Jan.24 - Feb.01).
- At the earliest at 5.53 a.m. (May 23 - Jun.01).

Graph I (p.14) shows the annual variations in the times for the phenomena discussed above, as they are in Sri Lanka.

⁴ That the night sky is completely dark is confirmed in the *McGraw-Hill Encyclopedia of Science and Technology*: 'Before this time [morning astronomical twilight] there is complete absence of sunlight.'

Fig. 13

GRAPH I



I - The Phenomenon of Dawn (arjuna)

(2)

Date: 27th March, 1995

Location: Adam's Peak (*Siri Pada*, Sri Lanka's second highest mountain, alt. 2243 m), south-central Sri Lanka

On 26th March, 1995, the author, a Ven. Piyaratana (Sri Lanka), and a group of Sinhalese lay followers climbed Adam's Peak to reach the peak on the following day at about 2.00 a.m. After a rest, at about 4.00 a.m., they watched the eastern night sky, which was completely dark.

I. 5.02 a.m. White light appeared, which increased gradually.

II. 5.12 a.m. A **dim red** appeared.

(The lay organizer of the trip took several exposures on his camera, which turned out black. The light was yet too dim to be captured by an ordinary camera.)

III. 5.40 a.m. Intense red appeared. The white light had spread to all four quarters, the darker element of night had gone, and there was considerable visibility all around.

(The photographs that were taken at this time, were therefore successful. They are shown in Chapter III, pp.53-56, as they depict the stages from 5.40 a.m. onwards till sunrise.)

IV. 6.11 a.m. Sunrise occurred. (cf. Table I and Graph I above.)

(3)

Date: 19th September, 2001

Location: Trincomale, north-eastern coast, Sri Lanka

Prospect: Eastern sky

Comments: These photographs were taken by the author with a sophisticated camera kindly lent him by Mr. G.B. Samarasinghe, a senior officer in the Department of Metereology, Colombo. According to the official times, *Morning Astronomical Twilight* (the first white light) begins on this date at 4.51 a.m. (cf. Table I and Graph I above). Due to clouds on the horizon, however, it was not possible to take photographs of this light. The abbot of a nearby temple, the Venerable Mihindupura Mahindavaṃsa Mahāthera, Saṅgha Nāyaka of two northern provinces in Sri Lanka, participated in the observation and can be seen seated, in Fig.20. Attempts were made to take photographs on the following days too, but since September falls in the rainy season, clouds covered the horizon. Moreover, the camera had to be returned to its owner.

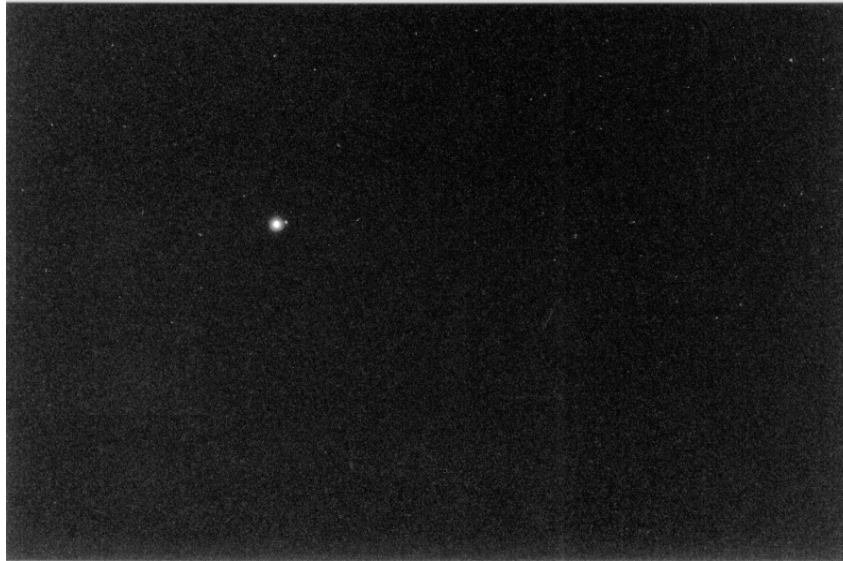


Fig. 14

430 a.m.
Venus and Mercury are on the left part of the eastern sky. The horizon is not visible.



Fig. 15

5.05 a.m.
A band of **dim red (*aruṇa* (dawn))** appears in the centre of the eastern horizon. Due to clouds, it appeared 4 min. later than normally. The white light that appeared at 4.51 a.m. (14 min. earlier) is now seen above the dim red. The horizon is only dimly visible. The two dots of light in the sea are navy ships.

It is at 5.01 a.m. (10 min. after the white light) that the features of ***aruṇa* (dawn = dim red)**, described in the Pāḷi Texts above, display themselves in the eastern quarter, before sunrise. In the surroundings it is still night; dark as at midnight. From this time onwards the band of **dim red (*aruṇa* (dawn))** increases progressively in intensity and volume and spreads mainly horizontally. The white light too increases further. The photographs below depict those stages till sunrise.



Fig. 16

5.11 a. m.

The white light and the band of **dim red** increase.

Fishing boats that have been hauled up onto land are dimly visible.



Fig. 17

5.20 a.m.

The band of **red** increases and spreads mainly horizontally.

Though the increase was clear to the naked eye, it was not captured by the camera because of the diffusion of the white light over almost the whole eastern quarter. The horizon is visible but not sharp. On land darkness still prevails.

I - The Phenomenon of Dawn (*aruṇa*)



Fig. 18

5.25 a.m.
The white light spreads on land. The shadow in the middle of the picture is a small tree shaken by the wind.



Fig. 19

5.30 a.m.
The white light has spread on land. The surroundings have become lit. The band of **red** spreads to cover the whole lower part of the eastern quarter and increases much in intensity and volume. Birds break into song, leave their nests and fly.



Fig. 20

In the foreground (seated) is Ven. M. Mahindavaṃsa Mahāththera, and two fishermen (squatting and standing) with their anchor on the ground. In the background is a road, on the right the Venerable's temple, and on the left its large Bodhi-tree.

5.30 a.m.
Due to the diffusion of sunlight the whole night (darkness) lapses, and a whiteness and a brightness can be seen in the remaining quarters. People, roads, leaves of trees, and blue, red etc. colours become visible. Travel no longer requires artificial light.
It is 30 min. to sunrise.



Fig. 21

5.39 a.m.
There is now sufficient light for objects to be seen distinctly: the road, bricks, houses, the large Bodhi-tree.
It is 21min. to sunrise.



6.00 a.m.
Sunrise.
The **red** has now blended with the gold of the sun and recedes after about 15 min. Because the sky turned from white to blue the red's intensity could be again captured by the camera.
The three black dots in the sky are three birds.

Fig. 22

Concluding Remarks⁵

The discussion about the features of dawn (*aruṇa*) has so far been from the perspective of dawn as it is described and discussed in the Pāḷi Texts, and as it can be observed in the physical world. In order to facilitate the reader's understanding of those descriptions and discussions this chapter has seen handmade pictures and photographs of dawn (*aruṇa*), and also the stages involved before and after dawn till sunrise. This discussion was, however, necessary on the one hand to understand 'dawn', and on the other to distinguish it from that *stage* called 'dawnrise' (*aruṇuggamana*): the actual **offence criterion** (*āpatti-aṅga*) for many rules in the Vinaya-Piṭaka. The next chapter, Chapter II discusses, therefore, the distinction between 'dawn' (*aruṇa*) and 'dawnrise' (*aruṇuggamana*) as it is found in the Pāḷi Texts. That being done, Chapter III discusses the issue at hand, namely the distinctive features of the phenomenon 'dawnrise' (*aruṇuggamana*). The above handmade pictures and photographs will, as a result, appear again and reviewed; other photographs (from Adam's Peak) will appear too, and the stages of 'dawn' (*aruṇa*) and 'dawnrise' (*aruṇuggamana*) will be distinguished.

⁵ More evidence that verifies the above times and data of dawn is found in Appendix ii: *Additional Images and Data* (p.119), where further observations and empirical data from a newspaper reporter and other monks are given.

PART TWO

When Is Dawnrise (*aruṇuggamana*)?

Chapter II

Dawn (*aruṇa*) versus Dawnrise (*aruṇuggamana*)

It was seen above that ‘dawn’ (*aruṇa*) was discussed and examined only because it is necessary to distinguish between ‘dawn’ (*aruṇa*) and ‘dawnrise’ (*aruṇuggamana*). As the *Vinayālaṅkāra Subcommentary* said (p.2): ‘In order to dispel any doubts regarding dawnrise (*aruṇuggamana*) the subject of dawn (*aruṇa*) should be discussed.’

In order to understand this distinction, it might be best to examine the different terms that are employed in the Vinaya. A such examination will necessarily be quite technical, but once it is complete, it may be presumed that little doubt is left about which terms apply and do not apply.

First the term *aruṇa* (dawn): it is to be found in the Canonical Pāli Texts only four times, namely in the *Vinaya-Piṭaka*: twice as *anto aruṇe* (within dawn) * and twice as *purāruṇā* (before dawn).

Second the terms *aruṇuggamaṇaṃ*, *aruṇuggaṇaṃ* (dawnrise) or *uddhaste aruṇe* (when dawn rises): these are to be found many times in the Canonical Pāli Texts, especially in the *Vinaya-Piṭaka*.

Seeing it from the Vinaya point of view, the actual ‘offence criterion’ (*āpatti-aṅga*) for many Vinaya rules is, in fact, *aruṇuggamaṇaṃ* (dawnrise). *Aruṇa* (dawn), on the other hand, is used only as a ‘criterion for non-offences’ (*anāpatti-aṅga*). For example:

‘There is no offence (<i>anāpatti</i>) if he withdraws the determination [of the robe] within dawn (<i>anto aruṇe</i>).’	‘ <i>Anāpatti: anto aruṇe [cīvaraṃ] paccud-dharati.</i> ’ (Vin iii.202)
‘There is no offence (<i>anāpatti</i>) if she [the bhikkhuni] determines [the bowl] within dawn (<i>anto aruṇe</i>).’	‘ <i>Anāpatti: anto aruṇe [pattaṃ] adhiṭṭheti.</i> ’ (Vin iii.202; iv.245)
‘There is no offence (<i>anāpatti</i>) if he leaves on the third night before dawn (<i>purāruṇā</i>) and takes up residence again.’	‘ <i>Anāpatti: tatiyāya rattiya purāruṇā nik-khamitvā puna vasati.</i> ’ (Vin iv.17,106)

The *Vinayālaṅkāra Subcommentary* explains ‘within dawn’ (*anto aruṇe*):

* A synonym for *anto aruṇe* (within dawn) is *aruṇ’abbhantare* (inside dawn), which is employed by the *Khuddasikkha-Mūlasikkha (Vinaya) Subcommentary*. Please see p. 25 below.

‘**Within dawn** (*anto aruṇe*) means: earlier than *aruṇodaya* (dawnrise).’ | ‘**Anto aruṇe**’ti: *aruṇodayato puretaram-eva.*’ (Vlt 2.224, 229)

And the *Namakkāra* (Sutta) *Subcommentary* explains how *aruṇ’odaya* is a synonym for *aruṇ’uggamana* (dawnrise):

‘**Aruṇodaya** means: at the time of *aru- nuggamana* (dawnrise).’⁶ | ‘**Aruṇodayan**’ti *aruṇuggamanavelāyaṃ.*’ (Nmṭ 49)

Thus, one distinction of ‘within dawn’ (*anto aruṇe*) is that it means earlier than *aru- nuggamana* (dawnrise), and it is used, therefore, only as a ‘criterion for non-offences’ (*anāpatti-aṅga*).

Another distinction of ‘within dawn’ (*anto aruṇe*) is that it lies within the last watch of the night (*pacchima-yāma*), at the time of *paccūsa* (towards dawnrise). *Paccūsa* (towards dawnrise) is explained in the *Vinayālaṅkāra Subcommentary*:

‘At the time of *paccūsa* means: **at the time of the last watch** (*pacchimayāma- kāle*) earlier than *aruṇodaya* (dawnrise). For it is usually said also ‘**just within dawn**’ (*anto aruṇeyeva*).’ | ‘*Paccūsakāle*’ti: *pacchimayāmakāle aruṇ- odayato puretarameva. Tathā hi vakkhanti anto aruṇeyeva.*’ (Vlt 2.224)

Hence, *paccūsa* (towards dawnrise) and *anto aruṇe* (within dawn) refer to the dark period of the **last watch of the night** (*pacchimayāma*). For, according to the Canon, *paccūsa* (towards dawnrise) is included in the period of night:

‘At night (*rattiyā*), at the time of *paccūsa* (towards dawnrise).’⁷ | ‘*Rattiyā, paccūsa-samayam.*’ (Vin i.78; iv.129)

⁶ *Aruṇodaya* resolves into *aruṇa* + *udaya*. The *Namakkāra* (Sutta) *Subcommentary* explains: ‘*Udaya* (rise) is related to *udeti, uggacchati*. The meaning is: time of dawnrise (*aruṇ’uggamana-velā*).’- (*Udeti, uggacchatī*’ti *udayo. Aruṇuggamanavelā*’ti *attho*.) (Nm 49)

⁷ *Paccūsa* (towards dawnrise) is derived from the prefix *pati* and the root *ūsa* in the sense of breaking, bursting forth, or rising (*rujāyaṃ*). (Abhps 212; *Pāli Sinhala Shabdakoshaya*) *Uśas* is the Vedic goddess of *Aruṇodaya* (Dawnrise). (*Prāyogika Sinhala Shabdakoshaya*) Therefore, *paccūsa* (*pati+ūsa*) means: [time] towards (*pati*) dawnrise (*Uśas*).

Dawnrise, on the other hand, occurs at the waning of the night, when the last watch of night (*pacchimayāma*) has passed. This too can be verified in the Canon, as in, for example, the account of when the Venerable Ānanda requests The Buddha to recite the *Pātimokkha*:

‘At the waning of the night, **when the last watch had passed** (*nikkhante pacchime yāme*), **when dawn arose** (*uddhaste aruṇe*), when the night had a joyful face (*nandimukhiyā rattiya*), for the third time did the Venerable Ānanda speak thus to the Exalted One: “... Let the Venerable One recite the *Pātimokkha*.”’

‘*Tatiyampi kho āyasmā Ānando abhikkantāya rattiya, nikkhante pacchime yāme, uddhaste aruṇe, nandimukhiyā rattiya, Bhagavantaṃ etadavoca: “... Uddisatu, bhante, Bhagavā pātimokkhan’ti.”*’

(Vin ii.236; A iv.205; Ud 52)

The Canonical Texts employ here the term **when dawn arose** (*uddhaste aruṇe*), which is synonymous with **dawnrise** (*aruṇuggamana*). The synonymity is explained in both the *Sāratthadīpanī* (Vinaya)- and the *Āṅguttara-nikāya* (Sutta) *Subcommentary*:

‘*Uddhaste aruṇe* (when dawn arose) means: *aruṇuggamane* (at dawnrise).’

(Sdṭ 3.426; Aṭ 3.231)

Thus, one distinction of **dawnrise** (*aruṇuggamana*) is that it occurs at the waning of the night, when the last watch of night (*pacchimayāma*) has passed, and refers to a time after **dawn** (*aruṇa*).

Another distinction of **dawnrise** (*aruṇuggamana*) is that it is the actual ‘offence criterion’ (*āpatti-aṅga*) for many Vinaya rules. This may be illustrated by examples of how the term figures in the Vinaya. The term is employed, for example, in connection with offences of expiation with forfeiture (*nissaggiyā pācittiyā*), and of expiation (*pācittiyā*):

‘**At dawnrise** (*saha aruṇuggamanā*) it [the absent robe] becomes one to be forfeited.’

‘*Saha aruṇuggamanā [cīvaraṃ] nissaggiyaṃ hoti.*’

(Vin iii.199)

‘On the eleventh **dawnrise** (*aruṇuggamane*) it [the extra robe] becomes one to be forfeited.’

‘*Ekādase aruṇuggamane [cīvaraṃ] nissaggiyaṃ hoti.*’

(Vin iii.196)

‘On the thirty-first **dawnrise** (*aruṇuggamane*) it [the kept robe-material] becomes one to be forfeited.’

‘*Ekatiṃse aruṇuggamane [cīvaraṃ] nissaggiyaṃ hoti.*’

(Vin iii.204)

‘On the eleventh **dawnrise** (*aruṇuggamane*) it [the extra bowl] becomes one to be forfeited.’

‘Improper time (*vikāla*) means: when noon has passed **till dawnrise** (*yāva aruṇuggamanā*).

Should he perceive it as the improper time (*vikāla*), when it is [in fact] the improper time (*vikāla*), and eats, he falls into an offence of expiation (*pācittiya*).’

‘*Ekādase aruṇuggamane [patto] nissaggiyo hoti.*’
(Vin iii.243)

‘*Vikālo nāma: majjhantike vītivatte yāva aruṇuggamanā.*

Vikāle vikālasaññī ... bhuñjati āpatti pācittiyāssa.’
(Vin iv.204)

Aruṇuggamana (dawnrise) has, as just mentioned previously, a synonym in the term *uddhaste aruṇe* (when dawn rises). This term is employed in, also, the Vinaya’s discussion about being the criterion for the concealment of a Saṅghādisesa offence:

‘**When dawn rises** (*uddhaste aruṇe*) the [Saṅghādisesa] offence becomes concealed.’

‘*Uddhaste aruṇe channā hoti āpatti.*’
(Vin ii.68)

But, says the *Samantapasādikā* (Vinaya) *Commentary*, if the offender declares his Saṅghādisesa offence ‘just within dawn’ (*anto aruṇe-yeva*), i.e. before dawnrise, he is in the clear:

‘Should he wish to conceal it, but ... declares it **just within dawn** (*anto aruṇe-yeva*), he has not concealed it.’

‘*Sace pana ... anto aruṇeyeva āroceti, ayaṃ chādetukāmo na chādeti nāma.*’
(VA vi.1175)

When the *Khuddasikkha-Mūlasikkha* (Vinaya) *Subcommentary* discusses the same matter it employs instead of ‘within dawn’ (*anto aruṇe*) the synonym ‘inside dawn’ (*aruṇ’abbhantare*):

‘Should a wish to conceal it arise a hundred times **inside dawn** (*aruṇ’abbhantare*), it [the offence] has simply not been concealed.’

‘*Sace pana aruṇabbhantare satakkhattumpi chādetukāmatā uppajjati, acchan-nāva hoti.*’
(Kṃṭ 85)

Thus, a Saṅghādisesa offence is not concealed ‘within dawn’ (*anto aruṇe*) or ‘inside dawn’ (*aruṇabbhantare*) but ‘when dawn rises’ (*uddhaste aruṇe*) or ‘at dawnrise’ (*aruṇuggamane*).

In this way, according to the Canonical and Post-Canonical *Vinaya* Texts quoted above, the actual **offence criterion** (*āpatti-aṅga*) is in all cases not ‘dawn’ (*aruṇa*), ‘within dawn’ (*anto aruṇe*), ‘inside dawn’ (*aruṇabbhantare*) or ‘before dawn’ (*purāruṇā*): the actual **offence criterion** (*āpatti-aṅga*) is in all cases ‘dawnrise’ (*aruṇuggamaṇaṃ*) or a synonym thereof.

Questions Regarding ‘Dawnrise’ (*aruṇuggamaṇa*)

Since it is thus ‘dawnrise’ (*aruṇuggamaṇa*) that in terms of *Vinaya* is to be considered, the following questions need to be addressed:

- How is ‘dawnrise’ (*aruṇuggamaṇa*) to be recognized?
- What are the distinctive signs or features of ‘dawnrise’?
- What happens when ‘dawnrise’ occurs?
- What happens when ‘dawnrise’ does not occur?

These and other questions will be discussed in the following chapters, with constant reference to the Pāli Texts.

Chapter III

The Phenomenon of Dawnrise (*aruṇuggamana*)

In order to understand the phenomenon of dawnrise (*aruṇuggamana*), it may make it clearer to understand first what happens at dawnrise.

Both direct and incidental descriptions of what happens at dawnrise can be found in the Pāḷi Texts. A direct and detailed description is found in, for example, the *Vināyāṅkāra Subcommentary*'s discussion of dawnrise (*aruṇuggamana*):

At Dawnrise the Four Quarters Become White, and the Night Has a Joyful Face

‘It was said [above] that the eastern quarter becomes red at the time of dawnrise. Therefore, because dawn rises at this time [i] a red band (*rattabhāgo*) can be discerned in the eastern quarter, and [ii] a whiteness (*odātabhāvo*) in the remaining quarters due to the diffusion of sunlight.’

‘*Aruṇuggatasamaye puratthimadisāya rattavaṇṇattā vuttā. Tasmā tasmiṃ samāye aruṇassa uṭṭhitattā,*

[i] *puratthimāya disāya rattabhāgo,*

[ii] *suriyālokassa patthaṭattā sesadisānaṃ odātabhāvo viññāyati.*’

(Vlṭ 1.22; Abhs.26)

Verification of the above facts, especially that *a whiteness* can be discerned in the remaining quarters at dawnrise, can be found elsewhere in the Pāḷi Texts. One is the Canonical account of when the Venerable Ānanda requests The Buddha to recite the *Pātimokkha*. This passage, quoted also above (p.24), employs a number of terms that all refer to the time of dawnrise (*aruṇuggamana*) — the most crucial of the terms being ‘the night has a joyful face’:

‘At the waning of the night, **when the last watch had passed** (*nikkhante pacchime yāme*), **when dawn arose** (*uddhaste aruṇe*), **when the night had a joyful face** (*nandimukhiyā rattiyā*), for the third time did the Venerable Ānanda speak thus to the Exalted One: “Venerable Sir, the night has waned, the last watch

‘*Tatīyampi kho āyasmā Ānando abhikkantāya rattiyā, nikkhante pacchime yāme, uddhaste aruṇe, nandimukhiyā rattiyā, Bhagavantaṃ etadavoca: “Abhikkantā, bhante, ratti, nikkhanto pacchimo yāmo, uddhastam aruṇam, nandimukhī ratti. Uddisatu, bhante, Bhagavā pātimokkhan’ti.”*’

(Vin ii.236; A iv.205; Ud 52)

has passed, dawn has arisen, and the night has a joyful face. Let the Venerable One recite the *Pātimokkha*.”⁸

The Commentaries and Subcommentaries that discuss this account explain:

‘**When the last watch** (*pacchimayāma*) **had passed** means: when the last watch had elapsed, had departed.’

‘**When dawn arose** (*uddhaste aruṇe*) means: at dawnrise (*aruṇuggamane*); when dawn stood up (*uṭṭhite aruṇe*)⁹. The meaning is when the **head** of dawn arose (*uggate aruṇasīse*).’

‘**When the night had a joyful face** (*nandimukhī ratti*) means: when it [the night] had a face of gladness (*tuṭṭhi*) due to its face having become **white** (*odāta*) in its quarters. The meaning is “when it [the night] had a bright (*pasanna*) face in its quarters”.’

‘*Nikkhante pacchime yāme*’*ti: niggate, apagate pacchime yāme*’*ti attho.*’ (UdA 124)

‘*Uddhaste aruṇe*’*ti: aruṇuggamane* (Sdṭ 3. 426; Aṭ 3.231); *uṭṭhite aruṇe.* (Sdṭ 3.371). *Uggate aruṇasīse*’*ti attho.*’ (Sdṭ 3.340, 3.383, 3.426; AA 762)

‘*Nandimukhiyā rattiya*’*ti: odāta-disā-mukhatāya, tuṭṭhi-mukhiyā. / pasanna-disā-mukhiyā*’*ti attho.*’ (Vmṭ ii.261, 198)

The *Pācityādiyojanapāli* (Vinaya) *Subcommentary* explains further:

‘It is, at the time when dawn has arisen (*aruṇuṭṭhitakāle*), due to the [night’s] face having become white (*odāta*) in its quarters that the night has a joyful face. It is said therefore in the *Samantapāsādika Commentary*: “For it is at the time when dawn has arisen that the night appears as

‘*Aruṇuṭṭhitakāle odāta-disā-mukhatāya, nandī mukhaṃ etissaṃ rattiyan*’*ti nandī-mukhī ratti. Tena vuttaṃ Samantapāsādikāyaṃ: ‘Aruṇuṭṭhitakālepi hi nandīmukhā viya ratti khāyati*’*ti.*’ (Pyṭ 530)

⁸ This episode with exactly the same sequence of terms is given in also A iv.205ff and Ud.51ff. *Nandimukhī ratti* (night with a joyful face) occurs in the same sequence in Vin i.288 and Ud.27 too. In Vin i.288, concerning the three robes rule, The Buddha himself employs the sequence: **when the last watch had passed** (*nikkhante pacchime yāme*), **when dawn arose** (*uddhaste aruṇe*), **when the night had a joyful face** (*nandimukhiyā rattiya*). Please see p.102. The sequence seems to be a standard one.

⁹ When the term *uṭṭhite aruṇe* recurs, it will for convenience’s sake be rendered the less unidiomatic: ‘when dawn arose/had arisen’.

having a joyful face.”¹⁰

And the *Samyutta-nikāya* (Sutta) *Commentary* says:

‘Its face in its quarters (*disā-mukhā*) means: its face in its four quarters (*catu-disā*).’ | ‘*Disā-mukhā*’ti: *catu-disā-mukhā*.’ (SA ii.253)

In summary: according to the quoted Pāli Texts, dawnrise (*aruṇuggamana*) occurs when the last watch of the night (*pacchimayāma*) has passed, at which time

- i) redness can be discerned in the lower part of the eastern quarter, and
- ii) a bright, joyful, and glad appearance of the sky (*nandimukha*), owing to a whiteness (*odātabhāva*) that has spread to all four quarters (the eastern, southern, western, and northern quarters), which is due to the diffusion of sunlight.

Thus, already at the time of dawnrise, sunlight extends to all four quarters. But as the sun is still below the rational horizon, and thus not visible to the observer, he can see only luminosity that extends to all four quarters. This luminosity is by the *Vināyālaṅkāra Subcommentary* called the ‘luminosity of dawn’ (*aruṇobhāsa*):

‘What was said was that at the time when dawn has arisen the [night’s] face becomes white in its quarters due to the luminosity of dawn (*aruṇobhāsa*).’ | ‘*Aruṇuggatakāle aruṇobhāsenā odātadisa-mukha-bhāvo vutto*.’ (VIṭ 1.22)

At Dawnrise The Night Becomes Light

The ‘luminosity of dawn’ is, as mentioned, sunlight that at dawnrise (*aruṇuggamana*) has diffused to all four quarters. As a result, the darkness of night is dispelled and the night becomes light (*vibhātamāna*). This is discussed in the *Udāna Commentary*’s gloss of the Canonical term *nandimukhī ratti* (night with a joyful face). What is there pointed out is that *the night becomes light* due only to the rise and radiance of dawn. But in speaking of the ‘luminosity of dawn’ (*aruṇobhāsa*), the *Udāna Commentary* employs instead the synonym *aruṇa-ppabhā* (radiance of dawn):

‘When the night had a joyful face (*na-* | ‘*Nandimukhiyā rattiyā*’ti: *aruṇassa ugga-*

¹⁰ VA vi.1287. The Subcommentary Vnl 1.29 explains: ‘The night appears to have a glad face [expression]’ (*pīti-mukhā viya khāyati*).

ndimukhī ratti) means: due only to the rise of dawn and **radiance of dawn** (*aruṇappabhā*) did the night appear to have a face that brings joy to beings living dependent on sunlight. The meaning is that it [the night] **became light** (*vibhātamānā*).

tattā eva aruṇappabhāya suriyālokūpajīvino satte nandāpanamukhiyā viya rattiyā jātāya; vibhātamānāyā'ti attho.'
(UdA 124)

The term *vi-bhā-ta-mānā* (it became light) derives, according to the *Dhātumañjūsā* Pāli Grammar, from the prefix *vi* and the root *bhā* in the sense of splendour or light (*dittiyam*) (Dhtm). The word analysis in the *Subodhālaṅkāra* (Vinaya) *Subcommentary* says further:

‘**Vibhāti** (it becomes light) means: it becomes distinctively lit up (*visesena pabhāti*), it is brilliant (*sobhati*), it becomes effulgent (*dibbati*).’

‘**Vibhātī**’*ti: visesena pabhāti, sobhati, dibbati.*’
(Sbṭ 204, 219)

And the *Saddanītipparāṇa* Pāli Grammar explains *dibbati* (effulgent):

‘**Dibbati** (it becomes effulgent) means: it shines (*virocati*), is possessed of radiance (*sa-ppabhā hoti*).’

‘**Dibbati**’*ti: virocati, sa-ppabhā hoti.*’
(Sdn 259)

By contrast, the *Suttanipāta Commentary* points out that has the night not become light, it is darkness which prevails:

‘Has the night not become light (*na vibhāyati*), darkness (*andhakāra*) prevails.’

‘*Ratti na vibhāyati, andhakāro jāto.*’
(Sn i.190)

Yet another term for ‘to become light’ (*vibhāti/vibhāyati*) is **bhāti** (to light up). It is, for example, used by The Buddha when He discusses the impermanence of the sun, moon and universe:

‘As far as the moon and sun revolve, shining (*virocamānā*) and lighting up the quarters (*disā bhanti*), so far extends the thousand-fold world-system.’¹¹

‘*Yāvatā candima-suriyā pariharanti disā bhanti virocamānā, tāva saḥassadhā loko.*’
(A v.59)

¹¹ The Buddha utters this passage also at, for example, M i.328 and A i.227, albeit in other contexts. In Vin i.168 He Himself uses the term *ratti vibhāyati*. Please see p.102.

Lighting up the quarters (*disā bhanti*) is explained in the *Vimativinodani* (Vinaya) Subcommentary:

‘*Disā bhanti* (lighting up the quarters) | ‘*Disā bhanti*’*ti: sabbā disā vigat’andha-*
means: all quarters (*sabbā disā*) look pri- | *kārā paññāyanti.*’ (Vṃṭ 1.52)
vative of darkness (*vigatandhakārā*).’

In this way, terms that derive from *bhā* all indicate splendour, light, distinctive radiance, shining, and brilliance: all privation of darkness. The above-mentioned terms *o-bhā-sa* (luminosity) and *pa-bhā* (radiance) too derive from *bhā*.¹²

The *Udāna Commentary*’s above gloss of the Canonical term ‘*nandimukhī ratti*’ (night with a joyful face) spoke further of how ‘beings living dependent on sunlight’ feel joy at the rise of dawn, when the night becomes light.

It should in this context perhaps be noted that beings are, generally speaking, of two kinds: *diurnal* (those living dependent on sunlight and who are thus active, animated and joyful by day) and *nocturnal* (those who, because they can see in the dark, are active and joyful by night).

Human beings, monkeys, the majority of birds etc. are diurnal. It is, for example, common knowledge that at the light of dawn, birds break into song with their ‘dawn chorus’. A vivid expression of how, especially, human beings react to the sunlight of dawnrise can be found in also, for example, ancient Vedic literature:

Shining forth, the Sun rises from the laps of the **dawns** (*Uśas*), greeted with gladness by singers. (A Vedic Reader)

Drawing on ancient Vedic literature, a Vedic reader and a Sinhalese encyclopaedia give more details of how the ‘light of dawn’ (*aruṇāloka*) affects the physical surroundings, human beings and animals:

Uśas, the goddess of **Dawn** clothed in light appears in the east. She is young and illumines the ends of the sky when she awakes. She has radiant beams, is born on a

¹² Vedic and Sanskrit literature too refer to the light or shining indicated by **bhā**: ‘1. *vi-bhā*, ... *-bhāti*, to shine or gleam forth, come to light, become visible, appear ... to shine upon, illumine ... to produce light ... to shine brightly, glitter, be resplendent or beautiful 2. **Vi-bhā** ... shining, bright ... light, lustre, splendour, beauty ...; **vi-bhāt**, shining, splendid (applied to *Uśas*) ...; **vi-bhāta** ... shone forth, grown light &c. (*°tā vibhāvarī*, the morning has dawned ...); become visible, appeared ...; n. dawn, day-break, morning — **Prabhā**, f. light, splendour, radiance, beautiful appearance ...; *pra-* 1. *bhā* ... *-bhāti*, to shine forth, begin to become light, shine, gleam **Prabhāta** ... shone forth, begun to become clear or light ...; n. day-break, dawn, morning ...; **prabhāta-kāla**, m. time of daybreak, early morning’ (A Sanskrit English Dictionary)

shining car drawn by ruddy steeds which represent the red rays of morning. She leads on the beautiful white horse and is preceding the sun. She removes the black robe of night and the Black One [the night] yields a path to the ruddy *Uśas*. *Agni* [the Fire-god] and *Sūriya* [the Sun-god] sit in the lap of the ruddy *Uśas* and awake or arise from her lap. (A Vedic Reader)

In Vedic times, the light of dawn (*aruṇāloka*) was deified as *Uśas*. *Uśas* is the goddess of Dawnrise (*aruṇodaya*)¹³. When she appears she animates and awakens humans and animals. At this time birds leave their nests and fly. People engage in their work. She lights up the roads. She removes the gate of darkness. (Sinhala Vishvakoshaya)

The latter description of dawnrise in Vedic literature matches thus the *Udāna Commentary*'s above-mentioned gloss of the Canonical term *nandīmukhī ratti* (night with a joyful face). That Canonical term is in fact a succinct description of the day-light effects dawnrise has on diurnal beings and their surroundings. This agrees furthermore with the *Udāna Commentary*'s explanation of how dawnrise occurs when the night becomes light (*vibhātamānā*). To repeat the *Udāna Commentary*'s gloss:

‘When the night had a joyful face’ means: due only to the rise of dawn and radiance of dawn did the night appear to have a face that brings joy to beings living dependent on sunlight. The meaning is that it [the night] **became light** (*vibhātamānā*). (UdA 124)

Dawnrise Occurs When the Night Becomes Light

That dawnrise (*aruṇuggamana*) occurs when the night becomes light (*vibhātamānāyā rattiya*), and that those two terms refer thus to two features of the same phenomenon, is evident elsewhere in the Pāli Texts. It is mentioned in, for example, the *Dhammapada Commentary*'s account of a King Udena's birth. His mother, the pregnant queen, went into labour at dusk. She gave birth to him at the exact and same time as three atmospheric phenomena took place — the night became light, clouds scattered, and dawnrise occurred:

‘At sunset the pains of labour came upon her, and a great storm arose, going in all directions. The delicate queen did not sleep all night. But the scattering of the clouds, dawnrise (<i>aruṇuggamana</i>), and the child-birth occurred at one and the same moment (<i>ekakkhaṇe yeva</i>) as the	‘ <i>Athassā suriyatthaṅgamanakāle kammajavātā caliṃsu. Sabbadisāsu gacchanto mahāmegho uṭṭhahi. Sukhedhitāya rājamahesiyā sabbarattiṃ niddā nāma nāho-si. Vibhātamānāya pana rattiya valahakavigamo ca, aruṇuggamanañca tassā gabbhavuṭṭhānañca ekakkhaṇe yeva</i>
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¹³ *Aruṇodaya* is a synonym for *aruṇuggamana*. Please see p.23.

night became light (*vibhātamānāya rattiyā*).’ (DhA.165)

Another example is the *Cariyāpiṭaka* (Sutta) *Commentary*’s account about Sasa-panḍita, The Bodhisatta Gotama in a past life, who explained to his friends the way of practice when the night became light, just at the time of dawnrise:

‘**When the night became light** (*vibhātāya rattiyā*), **just at the time of dawnrise** (*aruṇuggamanavelāyameva*) ... I told the monkey etc. my friends: “Prepare the almsgiving and so forth”, and explained to them the way of practice.’ (CpA 103)

A third example is from the *Jātaka Commentary*’s account of The Bodhisatta when he was Prince Vessantara, whose generosity extended as far as to give away even his little children. Not knowing this, his wife Princess Maddī spent a whole moonlit night in fruitless search of their children. Twice during the night she went to The Bodhisatta, and again a third time, when the night became light and dawnrise occurred:

‘**Then the night became light** (*ratti vibhāyī*), and **dawnrise occurred** (*aruṇodayo jāto*)¹⁴. She went again, stood near The Bodhisatta and lamented.’ (JA vi.565)

A fourth example is in the *Questions of King Milinda* (*Milindapañha*), when King Milinda prepares to assume the status of a sage, prior to discussing the dilemmas with Venerable Nāgasena:

‘Then, **when the night became light** (*pa-bhātāya rattiyā*)¹⁵, **when dawn arose** (*uddhaste aruṇe*)¹⁶, King Milinda bathed his head, recollected The Sammā Sambudhas of the past, future and present and made eight vows.’ (Miln 90)

¹⁴ *Aruṇodaya*: Please see p.23.

¹⁵ *Pa-bhā-ta* (it became light) derives from the prefix *pa* and the root *bhā* in the sense of splendour or light (*dittiyam*) (Dhtm). It is a synonym for *vi-bhā-ta* or *vi-bhā-ta-māna* (cf. p.30f).

¹⁶ *Uddhaste aruṇe* (when dawn arose): Please see p.28.

A fifth and more extensive example is the account of the woman Paṭācāra. It is discussed in several places, one of which is the *Therīgātha Commentary*.

Being pregnant, Paṭācāra was on her way home with her husband and child. As darkness fell and a rainstorm approached, she went into labour and gave birth to a second child. Her husband left her on the wayside, to find material for a shelter. While cutting a bush on an anthill, he was bitten by a venomous snake and died. Having spent the night on the wayside, Paṭācāra set out to find her husband ‘when the night became light’ (*vibhātāya rattiyā*):

‘She spent the night [there], and **when the night became light** (*vibhātāya rattiyā*), she laid down on a pad of cloth her [new-born] child, who was like a piece of meat, and embraced it in her hands and chest. She said to the other child: “Come dear child, your father went this way”, set out along the path her husband had taken, and **saw him** (*disvā*) lying dead on the anthill.’

‘*Sā rattim vītināmetvā, vibhātāya rattiyā maṃsapesivaṇṇaṃ ekaṃ puttaṃ piḷotikacumbaṭake nipajjāpervā, hatthehi urehi ca pariggahetvā, itaraṃ “Ehi, tāta, pitā te ito gato”ti vatvā, sāmikena gatamaggena gacchantī taṃ vammikasamīpe kalaṃ katamā nisinnaṃ **disvā**.*’ (ThigA.109)

In this passage, from the *Therīgātha Commentary*, the term ‘when the night became light’ (*vibhātāya rattiyā*) was employed. Giving the same account, the *Dhammapada Commentary* employs instead the term ‘when dawn arose’ (*vuṭṭhite aruṇe*):

‘She spent the night [there] and **when dawn arose** (*vuṭṭhite aruṇe*) she took her [new-born] child who was like a piece of meat, and placed it on her hip. She gave the other child one of her fingers to hold, said: “Come dear child, your father went this way”, set out along the path her husband had taken, and **saw** (*disvā*) that he had fallen dead on the anthill and that his body was blue and rigid.’

‘*Sā [tattha] rattim vītināmesi, vuṭṭhite aruṇe maṃsapesivaṇṇaṃ ekaṃ puttaṃ ankenādaya, ekaṃ aṅguliyā gahetvā, “Ehi, tāta, pitā te ito gato”ti vatvā, sāmikassa gatamaggena gacchantī, taṃ vammikamatthake kālaṃ katvā patitaṃ nīlavaṇṇaṃ, taddhasarīraṃ **disvā***’ (DhA ii.263)

The *Vimativinodani* (Vinaya) *Subcommentary* explains how ‘when dawn arose’ (*vuṭṭhite aruṇe*) is a synonym for dawnrise (*aruṇuggamana*):

‘*Vuṭṭhite aruṇe* (when dawn arose) means: *aruṇuggamane* (at dawnrise)’.¹⁷
(Vvṭ 1.246)

Thus, although the two Commentaries employ two different terms (‘when the night became light’ (*vibhātāya rattiya*) and ‘when dawn arose’ (*vuṭṭhite aruṇe*)) to refer to the time when Paṭācāra set out, they describe one and the same sequence of events: the two terms refer therefore to the same time.

The *Aṅguttara-nikāya Commentary* gives more details about the account of Paṭācāra. It says she set out after spending ‘the whole night’ (*sabbarattiṃ*) on the wayside. That means she did not set out till the very end of night. The term used to describe the time when she set out is ‘when it grew light’ (*āloke sañjāte*). This Commentary describes also how Paṭācāra looked about, following her deceased husband’s footsteps:

<p>‘She spent the whole night (<i>sabbarattiṃ</i>) [there] and when it grew light (<i>āloke sañjāte</i>), she looked about, following his footsteps (<i>pada</i>), and saw him (<i>disvā</i>) fallen at the bottom of the anthill.’</p>	<p>‘<i>Sā sabbarattiṃ khepetvā āloke sañjāte padānusārena oloketī vammikapāde patitaṃ disvā.</i>’ (AA i.358)</p>
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Comparing these three versions of Paṭācāra’s account, it can be understood that dawnrise (*aruṇuggamana*) occurs at a time when

- the whole night (*sabba-ratti*) has passed, and
- when it grows light (*āloke sañjāte*), that is, when ‘the night becomes light’ (*vibhātāya rattiya*).

Thus dawnrise coincides with the time when natural light (*āloka*) surrounds one who is out of doors.

The above-mentioned *Aṅguttara-nikāya Commentary*’s version of the account of Paṭācāra described how it grows light (*āloke sañjāte*) at the end of the whole night. Quite a number of other Pāli Texts also show that ‘dawnrise’ (*aruṇuggamana*), and the ‘night becoming light’ (*vibhātā ratti*), occur at the end of the whole night and that they are not part of night.

¹⁷ *Vuṭṭhite* resolves into *va + uṭṭhite* in the sense of ‘standing up’. (P.E.D) When this term (*vuṭṭhite aruṇe*) recurs, it will for convenience’s sake be rendered the less unidiomatic: ‘when dawn arose/had arisen’.

‘Dawnrise’ and the ‘Night Becoming Light’ Occur after the End of the Whole Night

Dawnrise Occurs after the End of the Whole Night

One passage which shows that dawnrise (*aruṇuggamaṇa*) occurs at the end, at the lapse of the whole night, is from the *Jātaka Commentary*, and concerns a King Cūḷanī. The night before attacking the city of Upakārī, he and his enormous army ‘surrounded the city ... kindled several hundreds of thousands of brands (*ukkā*)¹⁸, and there they stood, ready to take it [the city] at the rise of dawn (*aruṇe uggacchanteyeva*)’ (JA vi.434):

‘Then, **after the lapse of that night** (*tassā rattiyā accayena*), leading his army, King Cūḷanī came up to that city. Explaining this incident the Teacher [The Buddha] said:

“Having kept watch **the whole night** (*kaṣiṇaṃ rattim*)
The powerful king Cūḷanī
When dawn had arisen
(*udentaṃ aruṇuggasmiṃ*)
Came up to the city Upakārī.” ’

‘*Atha tassā rattiyā accayena Cūḷanīrājā senaṅgaṃ vicārayamāno taṃ nagaraṃ upāgami. Tamatthaṃ pakāsento Satthā āha:*

“*Rakkhitvā kaṣiṇaṃ rattim
Cūḷanīyo mahabbalo
Udentam aruṇuggasmiṃ
Upakāriṃ upāgami.*” ’ (JA vi.448)

The Pāḷi for ‘the whole night’ is *kaṣiṇaṃ ratti*. *Rattim* means ‘night’, and *kaṣiṇa* means ‘whole’. *Kaṣiṇa* has here a specific meaning, which is explained in the *Jātaka Commentary*’s subsequent word analysis:

‘There, ***kaṣiṇaṃ rattim*** (the whole night) means: the entire night (*sakalaṃ*), without remainder (*nissesaṃ*).’

‘*Tattha, kaṣiṇaṃ rattin’ ti: sakalaṃ, nissesaṃ.*’ (JA vi.448)

A second passage which shows that dawnrise (*aruṇuggamaṇa*) occurs at the end of the whole night is from the *Jātaka Commentary*, in the word analysis of the *Sudhābhajana-jātaka*. The terms used are self-evident:

‘**At the expiration of night** (*jighañṇarattim*) ... **at the end of night** (*pacchimarattim*)

‘*Jighañṇarattim ... pacchimarattim, rattipariyosāne, aruṇe uggate puratthimā*

¹⁸ Ordinarily speaking this would be *torches*. But the literary word *brands* has been preferred, as there are in a later chapter several references to *torches* of the modern electrical type (p.58ff).

tiṃ), **at the termination of night** (*rattipariyosāne*), **when dawn arises** (*aruṇuggate*) the eastern quarter appears to have a form so glorious, due to the beauty of its redness.’

disā rattasuvannaṭāya uttamarūpadharā hutvā dissatī’ti.’ (JA v.403)

A third passage is again from the *Jātaka Commentary*, about when the Bodhisatta was a golden goose. A queen Khemā longed to hear a golden goose teach the Dhamma. The Bodhisatta was caught, and taught Dhamma the whole night:

‘The Bodhisatta taught the king Dhamma **the whole night** (*sabbarattim*), and then the Queen’s longing subsided. **Just at the time of dawnrise** (*aruṇuggamanavelāyameva*) He established the king in the five precepts, advised him to be diligent and left for *Citta Peak*.’

‘Mahāsatto sabbarattim rañño dhammaṃ desesi. Deviyā dohaḷo paṭippassambhi. Mahāsatto aruṇuggamanavelāyameva rājānaṃ pañcasu sīlesu paṭiṭṭhapetvā, appamādena ovaditvā Cittakūṭameva gato.’ (JA iv.430)

A fourth passage is again from the *Jātaka Commentary*, and concerns the Venerable Samiddhi. He had meditated the whole night, and bathed at the time of dawnrise:

‘The Venerable Samiddhi exerted himself in meditation the **whole night** (*sabbarattim*), and **at the time of dawnrise** (*aruṇuggamanavelāya*), he bathed, dried his body, put on his loin-cloth, took his upper robe in his hand and stood to one side.’

‘Āyasmā Samiddhi sabbarattim padhānaṃ padahitvā, aruṇuggamanavelāyanhatvā, suvaṇṇavaṇṇaṃ attabhāvaṃ sukkhāpayamāno antaravāsakaṃ nivāsetvā, uttarāsaṅgaṃ hatthena gahetvā aṭṭhāsi.’ (JA ii.56)

These four passages given above as examples, all describe that dawnrise (*aruṇuggamaṇa*) occurs at the end of the whole night. Discussing this matter, the *Vinayālaṅkāra Subcommentary* confirms that this fact is described everywhere in the Pāli Texts:

‘On account of the arrival of dawn, **dawnrise** (*aruṇuṭṭhānaṃ*) is everywhere [in the Pāli Texts] described to occur **at the termination of night** (*rattipariyosāne*).’

‘Sabbattha rattipariyosāne āgami-aruṇavaseneva aruṇuṭṭhānaṃ dassitaṃ.’ (Vlt 1.410)

That dawnrise occurs at the termination or end of night can be understood by reference also to the *Dīgha-nikāya Commentary*'s definition of the 'duration of night'. There it says that night lasts till dawnrise, and it ends thus by dawnrise:

'Night lasts from sunset till dawnrise (yā-
va aruṇuggamanā).'
'Suriyatthaṅgamanato yāva aruṇuggama-
nā ratti.'

(DA iii.868)

This definition too confirms that dawnrise marks the end of night. As mentioned above (p.27), it is so, because at dawnrise — instead of darkness —

- [i] 'a red band can be discerned in the eastern quarter, and
- [ii] a *whiteness* in the remaining quarters due to the diffusion of sulight.'

(Vl 1.22; Abhs.26)

The Night Becomes Light after the End of the Whole Night

The Pāli Texts show further that just as dawnrise (*aruṇuggamana*) occurs at the end of the whole night, so does the night become light (*vibhātāya rattiyā*) at the end of the whole night. The *Samyutta-nikāya Commentary* mentions this in the account of a meditating monk:

'Just at sunset, while pacing up and down a monk trod upon a thorn. He ignored the pain, paced up and down **the whole night** (*sabbarattiṃ*), and **when the night became light** (*vibhātāya rattiyā*) he gave a signal to another [monk]. The other came and inquired.'

'Eko [bhikkhu] suriye atthaṅgatatteyeva caṅkamanto kaṅṭakamaṅ akkāmi. So taṃ vedanaṃ abbohārikaṃ katvā **sabbarattiṃ** caṅkamitvā **vibhātāya rattiyā** aññassa saññaṃ adāsi. So āgantvā pucchi.'

(SA ii.296)

Another passage that mentions how the night becomes light (*vibhātāya rattiyā*) at the end of the whole night, is the above-mentioned account from the *Dhammapada Commentary*, about the King Udena's birth:

'The delicate queen did not sleep **all night** (*sabbarattiṃ*). But the scattering of the clouds, **dawnrise** (*aruṇuggamana*), and the child-birth occurred **at one and the same moment** (*ekakkhaṇe yeva*) **as the night became light** (*vibhātamānāya rattiyā*).'

'Sukhedhitāya rājamahesiyā **sabbarattiṃ** niddā nāma nāhosi. **Vibhātamānāya pana rattiyā** valahakavigamo ca, **aruṇuggamanañca** tassā gabbhavuṭṭhānañca **ekakkhaṇe yeva** ahosi.'

(DhA.165)

In an attempt to determine what ‘dawnrise’ (*aruṇuggamana*) refers to in the Pāli Texts, the preceding pages have seen the discussion of thirteen Pāli terms, from a wide range of sources, Canonical and post-canonical. It would therefore, at this point, be useful to try to evaluate those terms as a whole.

Synonymous Terms for Dawnrise (*aruṇuggamana*)

As established above, the following thirteen terms all refer to the phenomenon **dawnrise** (*aruṇuggamana*):

- | | |
|--------------------------------------|---|
| 1. <i>nandimukhiyā rattiyā</i> | (when the night had a joyful face), |
| 2. <i>odāta-disā-mukha-rattiyā</i> | (when the night had a white face in its quarters), |
| 3. <i>pasanna-disā-mukhi-rattiyā</i> | (when the night had a bright face in its quarters), |
| 4. <i>tuṭṭhi-mukki-rattiyā</i> | (when the night had a face of gladness), |
| 5. <i>vibhātāmānāyā rattiyā</i> | } (when the night became light), |
| 6. <i>vibhātāya rattiyā</i> | |
| 7. <i>pabhātāya rattiyā</i> | |
| 8. <i>āloke sañjāte</i> | (when it grew light), |
| 9. <i>uggate aruṇasīse</i> | (when the ‘head’ of dawn arose) , and |
| 10. <i>aruṇodaye jāte,</i> | } (when dawn arose). |
| 11. <i>uddhaste aruṇe</i> | |
| 12. <i>uṭṭhite aruṇe</i> | |
| 13. <i>vuṭṭhite aruṇe</i> | |

The different features of ‘dawnrise’ (*aruṇuggamana*) that these terms describe all manifest at one and the same time (*ekakkhaṇe yeva*). They are in all cases phenomena of light.

It is perhaps not unreasonable to assume that it is light of a considerable degree. There needs namely have been natural visibility close at hand for Paṭācāra to set out to find her husband, for her to see the path, to recognize her deceased husband, and to see that his corpse was blue and rigid. All this took place immediately after the **whole night** (darkness) had passed, **when the night** (darkness) **became light**, **when dawn arose**, and **when it grew light**. The things Paṭācāra could see, particularly the blueness of her deceased husband’s corpse, could not have been discerned in the darkness of night; they could have been discerned by only considerable light.

As the *Vinayālaṅkāra Subcommentary* and the *Udāna Commentary* said above (p. 29), the cause of that light is not the darkness of night but the luminosity and radiance of dawnrise. Further reference to the Pāli Texts confirms that at dawnrise (*aruṇuggamana*), when the night becomes light (*vibhātāya rattiyā*), there is indeed natural visibility.

Natural Visibility at Dawnrise

Three passages in the Pāli Texts show that there is natural visibility at dawnrise (*aruṇuggamana*), and that objects which were not visible at night are at this time visible to the naked eye, i.e. they have come to light.

One passage is from the *Dhammapada Commentary*, and concerns robbers who because of the darkness of night mistake a meditating Elder, the Venerable Khāṇu-Koṇḍañña, for a tree-stump. Only at dawnrise (*aruṇuggamana*) do the robbers realize their mistake:

‘On the road to Sāvatti that Elder seated himself on a flat rock, and entered into *jhāna*. Now at that time, a gang of five hundred robbers plundered a village, packed their bundles, carried them a long distance, reached that flat rock [at night] and thought: “Let us rest on the top of this flat rock.” Although they saw the Elder, they mistook him for the stump of a tree. Then one robber placed his bundle on the Elder’s head. Another robber rested his bundle against his body. Thus, one after the other, the five hundred robbers placed their bundles in a circle around the Elder, and then lay themselves down and slept. **At the time of dawnrise** (*aruṇuggamanakāle*) they woke up, and while gathering their bundles, they **saw** (*disvā*) the Elder, and thinking he was an evil spirit, they started to run away. The Elder said to them: “Lay disciples, don’t be afraid; I am a monk.” “Pardon us, Venerable Sir, we had mistaken you for the stump of a tree.”’

‘*Sāvattiyaṃ antaramagge so kira Thero ekasmiṃ piṭṭhipasāne nisinno jhānaṃ samāpajji. Athekaṃ gāmaṃ vilumpitvā pañcasatā corā baṇḍikaṃ bandhitvā dūraṃ gantvā “Imasmiṃ piṭṭhipāsāne vissamis-sāmā”ti piṭṭhipāsānasantikaṃ gantvā, Theram disvā’pi “Khaṇuko ayan”ti saññino ahesuṃ. Atheko coro Therassa sīse baṇḍikaṃ thapesi. Aparo taṃ nissāya bhaṇḍikaṃ thapesi. Evaṃ pañcahi satehi Theram parikkhipitvā sayampi nisinnā niddāyitvā aruṇuggamanakāle pabujjhitvā attano baṇḍikāni gaṇhantā Theram disvā “amanusso”ti saññāya palāyituṃ ārabhiṃsu. Atha te Thero āha: “Mā bhāyatha, upāsakā; pabbajito ahan”ti. ... “Khamatha, bhante, mayaṃ khaṇuka-saññino ahumhā”ti.’* (DhA ii.253)

Another passage which shows that there is natural visibility at dawnrise is also from the *Dhammapada Commentary*, and concerns an undesired baby boy whom a slave-woman has been instructed to leave in the road at night, for him to be killed in a fraudulent accident. The leading oxen of a caravan refuse to proceed once they

reach the boy, and only at dawnrise is the caravan-leader able to see what is holding them up:

‘In the city of Kosambi five hundred carts set out at the time towards dawnrise (*paccūsakāle*) on a trading expedition¹⁹. She [the slave-woman] brought him [the baby boy] and laid him down on the wheel-tracks. At that time the leader of the caravan happened to be in front; even so, when his oxen reached the place [where the baby boy lay], they threw off their yoke. Again and again the leader replaced their yoke and drove the oxen forwards, but as often as he did so, as often did they threw off their yoke, and refuse to budge. He was still struggling with them in this manner, when **dawn arose** (*aruṇaṃ uṭṭhahi*). “Why have the oxen reacted thus?” thought he, and looking down at the road, he **saw** (*disvā*) the baby boy and with his heart full of joy picked him up and carried him home.’

‘*Kosambiyaṃ pañcasakaṭasatāni paccūsakāle uṭṭhāya vaṇijjāya gacchanti. ... Sā naṃ [dārakaṃ] netvā cakkamagge nipajjāpesi. Tadā sākaṭikājeṭṭhako purato aho-si; athassa goṇā taṃ thānaṃ patvā dhuraṃ chaddesuṃ. Punappunaṃ āropetvā pājjiyamānā’pi purato na gacchiṃsu. Evaṃ tassa hi tehi saddhiṃ vāyamantas-seva aruṇaṃ uṭṭhahi. So “Kinnāmetaṃ goṇā kariṃsū?”’ti, maggaṃ olovento dārakaṃ disvā ... tuṭṭhamānaso taṃ gehaṃ nesi.’* (DhA i.175)

As opposed to human beings, oxen and, for example, owls, wild boar, dogs, cats, and rats are able to see in the dark²⁰. Therefore, although it was ‘time towards dawnrise’ (*paccūsa-kāla*), still dark that is, the oxen could see the baby boy on the road, two or three metres ahead of them. Being a human being, however, the caravan leader could not see the child until the darkness of night had been dispelled at dawnrise: until there was natural visibility.

The third passage that reveals the presence of natural visibility at dawnrise is from the *Jātaka Commentary*, and concerns a false mango-tree bearing poisonous fruits, outside the gate of a village. Thinking them to be mangoes, travellers would partake of them and die on the spot. The villagers used to go to the tree every day ‘just at the time of dawnrise’ (*aruṇuggamanakāle yeva*) to collect the belongings of such travel-

¹⁹ As mentioned p.23, *paccūsakāla* (time towards dawnrise) is included in the period of night. Nonetheless, because oxen can see in the dark, the five hundred carts set out at this time, presumably to avoid the traffic in the daybreak ‘rush hour’.

²⁰ Please see p.31f for details regarding diurnal and nocturnal animals.

lers, and throw the corpses in the forest. Once, due to The Bodhisatta’s sagacity, a group of travellers discovered that the mango tree was false and the fruits poisonous, and did not eat them. On the following day at dawnrise, the villagers went as usual to check the tree, and **saw** to their surprise, the travellers alive and well:

‘That day too, **just at the time of dawnrise** (*aruṇuggamanakāle yeva*) they went quickly to the foot of the tree thinking: “I will get oxen, I will get a cart, I will get their things”, and there they **saw** (*disvā*) the people in good health and asked them: “How did you discover that this is not a mango-tree?”’

‘*Te taṃ divasampi aruṇuggamanakāleyeva “mayhaṃ balivaddo bhavissati, mayhaṃ sakataṃ, mayhaṃ bhaṇḍan”ti vegena taṃ rukkhamūlaṃ gantvā manusse niroge disvā “kathaṃ tumhe imaṃ rukkhaṃ nāyaṃ ambarukkho’ti jānitthā?”ti pucchimṣu.*’ (JA i.271)

Natural Visibility When the Night Becomes Light

The above three passages from the Pāli Texts describe how objects become visible at the time referred to as ‘dawnrise’ (*aruṇuggamana*). Another three passages describe how objects likewise become visible at the time referred to as ‘when the night becomes light’ (*vibhātāya rattiyā*).

One passage is from the *Dhammapada Commentary*, and concerns a rich family whose house was burgled at night. Only when the night became light (*vibhātāya rattiyā*) did the people in the house see what had happened:

‘[At night], burglars entered the city through the sewers, dug a tunnel into the house of a rich family, took a large amount of gold and coin, and escaped through the same sewers. **When the night became light** (*vibhātāya rattiyā*) the people in the house **saw** (*disvā*) what had been done in the house by the burglars, followed their **footprints** (*padānupadaṃ*), reached a field, and there **saw** (*disvā*) the place where they had divided their spoils.’

‘*Corā [rattiyam] udakaniddhamanena nagaraṃ pavisitvā, ekasmiṃ aḍḍhakule ummaggaṃ bhinditvā, bahuṃ hiraññasuvaṇṇaṃ gahetvā, udakaniddhamaneneva nikkhamimṣu. Gehe manussā ca vibhātāya rattiyā corehi katakammaṃ disvā, padānupadaṃ gacchantā, taṃ khettaṃ gantvā, tattha corehi bhaṇḍassa bhājitaṭṭhānaṃ disvā*’ (DhA ii.37)

Another passage that describes how objects become visible when the night becomes light (*vibhātāya rattiyā*) is from the *Anguttara-nikāya Commentary*, and concerns the time when the god Vissakamma created five lotus-ponds for the young

prince Gotama to play in. Only when the night became light (*vibhātāya rattiyā*) did the people see the ponds:

‘The god Vissakamma created five lotus-ponds at night and determined: ‘Let five hues of lotuses bloom therein.’ Having created them, he vanished. Then, **when the night became light** (*vibhātāya rattiyā*), the people **saw** (*disvā*) them and went and informed the king. The king went there accompanied by the people, **saw** (*disvā*) the lotus-ponds and was pleased.’

‘*Vissakammadevaṇṇaputto rattibhāge pokkharāṇiyo māpesi ‘pañcavaṇṇāni cettha padumāni pupphantū’ ti adhiṭṭhāsi. Evaṃ tā māpetvā gato. Tato vibhātāya rattiyā mahājano disvā, gantvā rañño ārocesi. Rājā mahājanaparivāro gantvā pokkharāṇiyo disvā attamano ahosi.*’ (AA ii.236)

The third passage that describes how objects become visible when the night becomes light (*vibhātāya rattiyā*) is from the *Thūpavaṃsa*, and concerns the construction of the Great Cetiya in Anuradhapura, Sri Lanka. Here, the god Vissakamma created large golden seeds to be used for the Great Cetiya. Only when the night became light (*vibhātāya rattiyā*) did the villagers see the seeds:

‘During the **three watches of the night**, golden seeds appeared in an area of sixteen *karīsas*. The largest were as much as a span in size. The smallest eight inches. Then, **when the night became light** (*vibhātāya rattiyā*) the villagers **saw** (*disvā*) the golden seeds, set a guard around them, filled a vessel with golden seeds, and went and showed them to the king. The king paid due reverence to them and placed them in strongboxes for gold.’

‘*Tiyāmarattiṃ soḷasa karīsappamāṇe padese suvaṇṇabījāni utṭhahiṃsu. Tāni pamāṇato ukkaṭṭhāni vidatthipamāṇāni. Omakāni aṭṭhaṅgulappamāṇāni ahesuṃ. Atha vibhātāya rattiyā gāmaṇiyo suvaṇṇabījāni disvā samantato ārakkhā saṃvidahitvā suvaṇṇabījāni pātiyaṃ pūretvā āgantvā rañño dassesuṃ. Rājā tesampi yathārahaṃ sakkāraṃ kāretvā teveva suvaṇṇagopake akāsi.*’

(Tvm 58 - Maricavaṭṭhi Cetiya Kathā)

Summary

To conclude and repeat: The Pāli Texts seem to provide unequivocal evidence of the following facts:

- the Pāli terms *aruṇuggamana* (dawnrise), *nandimukhiyā rattiya* (night has a joyful face), *vibhātamānā ratti* (night becomes light) and *āloke sañjāte* (it grows light) refer to different features of one and the same phenomenon of light in the sky;
- at the appearance of that light there is natural visibility;
- the natural visibility is induced by nothing other than sunlight, which is, already at this time, diffused in all quarters; and
- dawnrise (*aruṇuggamana*) occurs at a time when the whole night (*sabbaratti*) has passed, and when it has grown light (*āloke sañjāte*): dawnrise lights up the night. In other words, when dawnrise occurs, the night becomes light.

It is because of these simultaneous phenomena of light at dawnrise (*aruṇuggamana*)

- that the robbers could see that the tree-stump was in fact a monk;
- that the caravan leader could see that the oxen refused to move because of a baby boy on the road;
- that Paṭācāra could see even the blueness and rigidity of her husband's corpse;
- that the villagers could see the unharmed travellers;
- that the people in the burgled house could discover the burglary, and follow the burglars' footprints;
- that the people could see the five lotus-ponds and the hues of the lotuses therein; and
- that the villagers could see the golden seeds.

Thus dawnrise coincides with the time before sunrise when natural light (*āloka*) surrounds one who is out of doors. The light is of such a degree that there is considerable visibility close at hand: one can see people, infants, goods, the rigidity or softness of objects, colours, ponds, a path, footprints etc.

Since it is by now easier perhaps to understand what is in the Pāli Texts meant by 'dawnrise' (*aruṇuggamana*), it may make it clearer at this point to look once more at the handmade pictures and photographs that were given above, (Chapter I, pp.6-20), so as to distinguish the stages of 'dawn' (*aruṇa*) and 'dawnrise' (*aruṇuggamana*). This time round, the terms 'dawn' and also 'dawnrise' have been inserted at the appropriate stage, as they are by now familiar to the reader.

Direct Observation of Dawnrise (*aruṇuggamana*)

Date: 28th-31st, December, 1994

Location: Nimalava Forest Hermitage, Kirinda, south-eastern coast, Sri Lanka

Prospect: Eastern night sky

Handmade Pictures

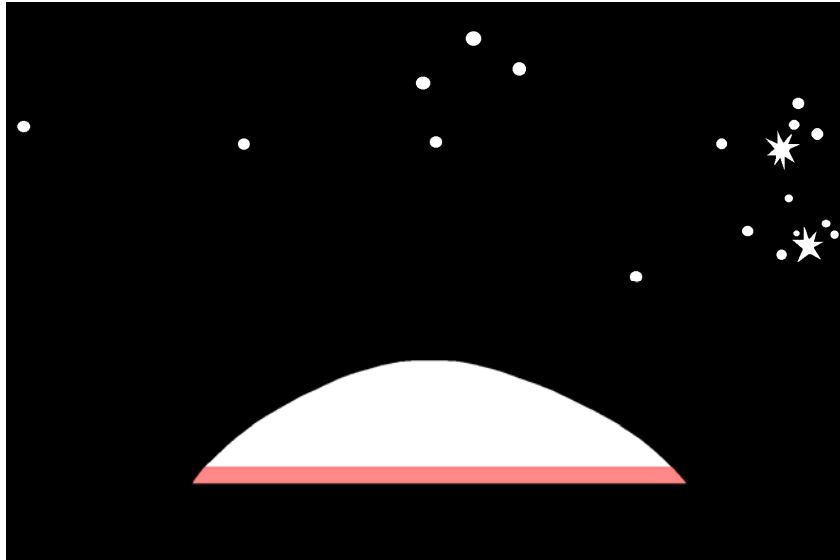


Fig. 8

5.15 a.m.

Dawn

A band of **dim red** (*aruṇa* (**dawn**)) appears in the centre of the eastern horizon. (The white light that appeared at 5.05 a.m. (10 min. earlier) is seen above the dim red.) The horizon is only dimly visible. Darkness still prevails in the surroundings.

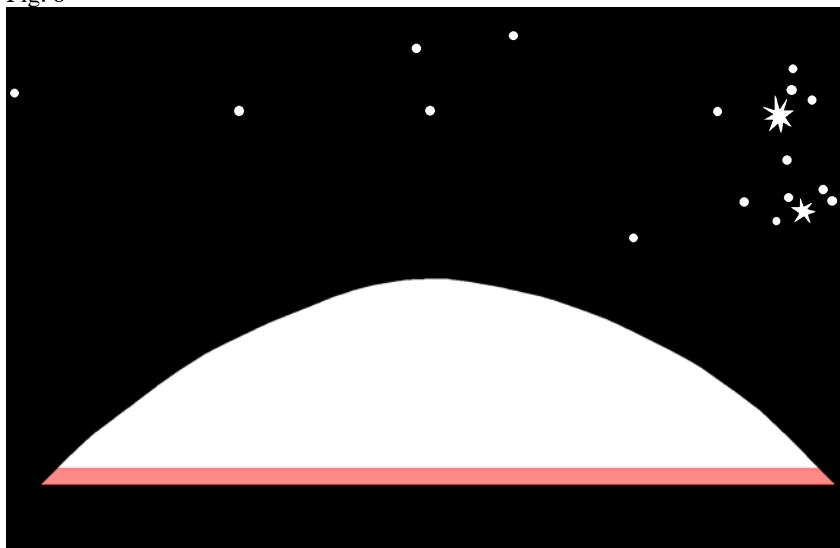
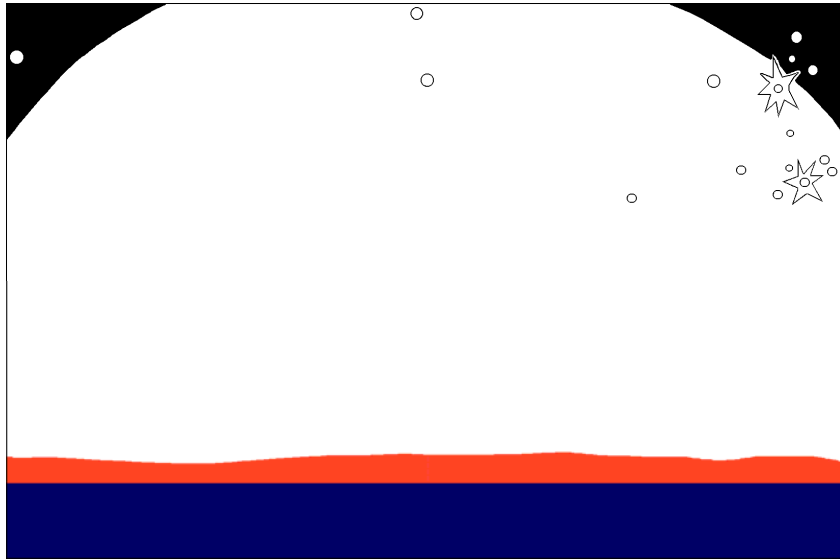


Fig. 9

5.20 a.m.

Dawn

The white light increases further. The band of **dim red** (*aruṇa* (**dawn**)) turns into a moderate pink, which becomes slowly red. The horizon is only dimly visible. Darkness still prevails in the surroundings.



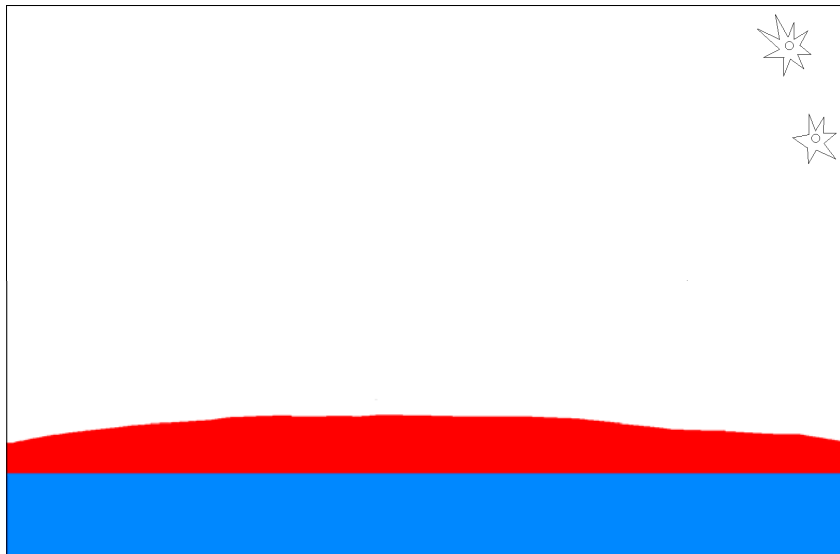
5.30 a.m.

Dawn

The white light spreads over almost the whole eastern quarter. Faint stars are dimly visible in the sky overhead. The band of **red (*aruṇa* (dawn))** increases in intensity and volume and spreads mainly horizontally. The horizon is visible but not sharp.

Fig. 10

The sea appears in dark blue. Darkness still prevails in the surroundings.



5.45 a.m.

Dawnrise

The white light spreads to all four quarters. The faint stars are no longer visible. Venus and Mercury remain clearly visible overhead, but with reduced brightness. The band of **red (*aruṇa* (dawn))** increases much in intensity and volume.

Fig. 11

A sharp horizon is visible. No more darkness prevails in the surroundings. The sea appears in its normal blue.

It is at 5.45 a.m. that the **features** of dawnrise (*aruṇuggamana*), described in the Pāli Texts above, display themselves. To repeat them briefly:

- The band of **red** (*aruṇa* (**dawn**)) becomes **intense**, has spread to cover the whole eastern horizon, and does not rise further. It reaches its culmination. This means: 'the 'head' (most prominent part) of dawn arises' (*uggate aruṇasīse*). (AA 762, etc.)
- There is white light in all four quarters.
- The whole night (darkness) has passed, and it becomes light.
- Objects on land can be seen clearly.
- Diurnal animals awake and their movements and calls can be heard.
- From 5.45 a.m. onwards it becomes gradually more and more light.
- Sun rises at 6.20 a.m.

Thus, at the time when these observations were made, dawnrise (*aruṇuggamana*) occurred 35 min. before sunrise.

It should perhaps be pointed out that

- 5.15 - 5.45 a.m. (Figs.8-11) is when **dawn** (*aruṇa*) occurs.
- 5.45 a.m. (Fig.11) is when **dawnrise** (*aruṇuggamana*) occurs.²¹

Date: 19th, September, 2001

Location: Trincomale, north-eastern coast, Sri Lanka

Prospect: Eastern sky

²¹ 5.15 - 5.45 a.m. can be regarded as the time of **within dawn** (*anto aruṇe*) discussed in Chapter II. There it was mentioned that **within dawn** (*anto aruṇe*) occurs in the dark period of the last watch of the night, earlier than **dawnrise** (*aruṇuggamana*), and that **dawnrise** occurs when the last watch of the night has passed (p.23f). This is confirmed by the direct observations. At 5.15 a.m. one is still surrounded by darkness. It is only close to 5.45 a.m. that light spreads gradually on land and at 5.45 a.m. the darkness has completely gone and one is surrounded by light. Please see also GRAPH I (p.14): interval between **dim red** (*aruṇa* (**dawn**)), and **intense red** (*aruṇuggamana* (**dawnrise**)).



Fig. 15

5:05 a.m.

Dawn

A band of **dim red (*aruṇa* (dawn))** appears on the horizon. Due to clouds, it appeared 4 min. later than normally. The white light that appeared at 4.51 a.m. (14 min. earlier) is now seen above the dim red.

The horizon is only dimly visible. The two dots of light in the sea are navy ships.



Fig. 16

5:11 a. m.

Dawn

The white light and the band of **dim red (*aruṇa* (dawn))** increase. Fishing boats that have been hauled up onto land are dimly visible.

III - The Phenomenon of Dawnrise (*aruṇuggamaṇa*)



Fig. 17

5:20 a.m.

Dawn

The band of **red** (*aruṇa* (**dawn**)) increases and spreads mainly horizontally. Though the increase was clear to the naked eye, it was not captured by the camera because of the diffusion of the white light over almost the whole eastern quarter. The horizon is visible but not sharp. On land darkness still prevails.



Fig. 18

5:25 a.m.

Dawn

The band of **red** (*aruṇa* (**dawn**)) increases and spreads mainly horizontally. The white light spreads on land. The shadow in the middle of the picture is a small tree shaken by the wind.



Fig. 19

5:30 a.m.

Dawnrise

The white light has spread on land. The surroundings have become lit. The band of **red** spreads to cover the whole lower part of the eastern quarter and increases much in intensity and volume.

Birds break into song, leave their nests and fly.

The features of dawnrise appear at this time.



Fig. 20

5:30 a.m.

Dawnrise

Due to the diffusion of sunlight the whole night (darkness) lapses, and a whiteness and a brightness can be seen in the remaining quarters. People, roads, leaves of trees, and blue, red etc. colours become visible. Travel no longer requires artificial light.

It is 30 min. to sunrise.

(In the foreground (seated) is Ven. M. Mahindavaṃsa Mahāththera, and two fishermen (squatting and standing) with their anchor on the ground. In the background is a road, on the right the Venerable's temple, and on the left its large Bodhi-tree.)

III - The Phenomenon of Dawnrise (*aruṇuggamaṇa*)



Fig. 21

5:39 a.m.
There is now sufficient light for objects to be seen distinctly: the road, bricks, houses, the large Bodhi-tree. It is 21 min. to sunrise.



Fig. 22

6:00 a.m.
Sunrise
The **red** has now blended with the gold of the sun and recedes after about 15 min. Because the sky turned from white to blue the **red's** intensity could be again captured by the camera. The three black dots in the sky are three birds.

It should perhaps be pointed out that on this date (19th, September, 2001)

- 5.01 - 5.30 a.m. (Figs.15-18) is when **dawn** (*aruṇa*) occurs.
- 5.30 a.m. (Fig.19) is when **dawnrise** (*aruṇuggamaṇa*) occurs.

Dawnrise from Adam's Peak

Date: 27th March, 1995

Location: Adam's Peak (*Siri Pada*, Sri Lanka's second highest mountain, alt. 2243 m), Central-West Province

Prospect: Eastern sky

It was mentioned above (p.15) that the author, a Ven. Piyaratana (Sri Lanka), and a group of Sinhalese lay followers climbed Adam's Peak to reach the peak on the following day at about 2.00 a.m. After a rest, at about 4.00 a.m., they watched the eastern night sky, which was completely dark.

- **5.02 a.m.** White light appeared, which increased gradually.
- **5.12 a.m.** A dim red appeared.
(The lay organizer of the trip took several exposures on his camera, which turned out black. The light was yet too dim to be captured by an ordinary camera.)
- **5.40 a.m.** Intense red appeared. The white light had spread to all four quarters, the darker element of night had gone, and there was considerable visibility all around.
(The photographs that were taken at this time, were therefore successful and are shown now below (p.53).)
- **6.11 a.m.** Sunrise occurred.

The features of dawnrise (*aruṇuggamaṇa*) occurred on this date 31 min. before sunrise. Mist and clouds at the horizon obscured slightly the intense red, which on the photographs (p.53) therefore appears somewhat weaker in tone.

III - The Phenomenon of Dawnrise (*aruṇuggamaṇa*)



5:40 a.m.

Dawn-rise

The white light has spread on land. The surroundings have become lit. The **red** spreads to cover the whole lower part of the eastern quarter and increases much in intensity and volume. *The features of dawnrise appear at this time.*

Fig. 23



5:50 a.m.

21min. to sunrise.

Fig. 24



6:11 a.m.

Sunrise

According to modern astronomy sunrise occurs when the upper limb of the sun is on the horizon.

(The Astronomical Almanac)



Fig. 25



6:12a.m.

The sun is above the horizon. The red still continues.

Fig. 26

III - The Phenomenon of Dawnrise (*aruṇuggamaṇa*)



6.13 a.m.
The sun is above the horizon.
The red still continues.

Fig. 27



6.18 a.m.
The sun is above the horizon.
The red recedes after about 10 min.

Fig. 28

Concluding Remarks²²

The discussion about the features of dawnrise has so far been from the perspective of dawnrise as it is described in the Pāḷi Texts, and as it can be observed in the physical world. The conclusions and observations related thereto can, however, be further substantiated by examining the matter from a quite other perspective: what happens when dawnrise does not occur?

In other words, the discussion will now be about how the Pāḷi Texts speak of the time prior to dawnrise; it will now be about *what is* and *what is not* dawnrise. The occurrence of dawnrise will be examined by contrast with the non-occurrence of dawnrise — dawnrise versus ‘non-dawnrise’.

²² More evidence that verifies the above times and data of dawnrise is found in Appendix ii: *Additional Images and Data* (p.122), where further observations and empirical data from other monks are given.

Chapter IV

The Phenomenon of Non-Dawnrise Versus Dawnrise

Non-Dawnrise

Darkness, Non-Visibility, Need of Artificial Light, and Work Cannot Be Carried Out

Two passages from the Pāḷi Texts describe how darkness and non-visibility prevail at ‘non-dawnrise’ (when dawn does not arise), and that, in consequence, people need artificial light to work. One such passage is from the *Dhammapada Commentary*, and concerns the ascetic Nārada, The Bodhisatta Gotama in a past life. It describes how another ascetic in his anger laid a curse upon Nārada, declaring that at sunrise Nārada’s head would split into seven pieces. With his psychic powers, Nārada saw that it was actually the other ascetic’s head that was going to split at sunrise. So, out of compassion, Nārada prevented dawnrise (*aruṇuggamana*) from occurring. The passage describes what happened next:

‘Nārada ... prevented with his psychic powers **dawnrise** (*aruṇuggamana*) from occurring. When dawn did not arise, the citizens went to the palace gates ... and **cried out**, “King! ... make dawn rise for us! ”.... Immediately the king went out with **brands** carried before him, and asked Nārada:

“**Work** in India,
Cannot be carried out, Nārada!
Why is the world covered in **darkness**?
Being asked, please answer me.” ’

‘Nārado... iddhibalena **aruṇuggama-**
naṃ nivāresi. Nāgarā aruṇe anugac-
chante rājadvāvaṃ gantvā, “Deva!...
aruṇaṃ no uṭṭhāpehi”ti, **kandiṃsu**. ...
Taṃ khaṇaññeva rājā **ukkāhi** dhāriya-
mānehi tattha gantvā Nāradaṃ āha:

“**Kammante** nappavattanti
Jambudīpassa, Nārada!
Kena loko **tamobhūto**?
Tamme akkhāhi pucchito.” ’

(DhA i.41)

The passage shows how, because they were unable to work in the dark, the citizens demanded that the king make dawn rise for them. The light and visibility required for their work would, needless to say, have to be of a considerable degree. It would have to render visible their general and immediate surroundings, as they would have to be able to see objects close at hand. To get this degree of light and visibility, they demanded therefore that the king make dawn rise. To make dawn rise, the king needed to reach Nārada elsewhere in the city. Since it was still dark, still night, ‘non-

dawnrise' that is, he could orient himself only by the artificial light of brands²³ carried before him. In modern times, when people go out before dawn has arisen, they orient themselves by the artificial light of, for example, an electric torch or street lighting.

It is evident, therefore, that so long as there is night darkness (and maybe negligible natural light and visibility, from the stars and moon perhaps) so long can dawn not be said to have arisen: a person who needs a torch or other artificial light to orient himself is a person who is out at night, prior to dawnrise.

The second passage that describes how darkness and non-visibility prevail at 'non-dawnrise', and that people are in consequence unable to work, is from the *Majjhimanikāya Commentary*. It too concerns The Bodhisatta Gotama in a past life, this time as the sage Mātaṅga. This time too an angry ascetic laid a curse upon The Bodhisatta, again saying that at sunrise His head would split into seven pieces. Again The Bodhisatta, now Mātaṅga, saw that it was actually the ascetic's head which was going to split at sunrise, and again out of compassion, He prevented (in this account) *sunrise* from occurring. This had, of course, an effect on dawnrise (*aruṇuggamana*). The passage describes what happened next:

'The Bodhisatta ... did with his psychic powers not allow the sun to arise. The extent of psychic powers of those who possess them cannot be imagined. From such a time onwards **dawnrise** (*aruṇuggamana*) does not appear. There is **no delimitation** between night and day. There is nobody who engages in the **work** of ploughing, trade, etc. Wondering whether this was a spell by ogres, ghosts, deities, dragons or celestial birds, the people felt alarmed. Thinking "What should we do?" ... they went and told this matter to the royal family. The king heard it, and although afraid, did not show signs of fear. He told them not to be afraid ... went with some attendants ... to the Sage Mātaṅga and asked him: "Is it you, Venerable Sir, who has not al-

'Mahāsatto ... iddhiyā suriyassa uggantum na adāsi. Iddhimato iddhivisayo acinteyyo. Tato paṭṭhāya **aruṇuggamanaṃ** na paññāyati. Rattindivaparicchedo natthi. Kasivañijjādāni **kammāni** payojento nāma natthi. Manussā "Yakkhāvaṭṭo nu kho ayaṃ, bhūta-devatā-nāga-supañṇāvaṭṭo"ti, upaddavappattā "Kiṃ kātābban"ti cintetvā ... rājakulaṃ gantvā tamatthaṃ ārocesuṃ. Rājā sutvā bhīto'pi abhītākāraṃ katvā "Mā, tātā, bhāyattha ..."ti, katipayeheva atthacarakehi manussehi ... Mātaṅga-ississa santikaṃ gantvā, "Bhante, tumhe **aruṇassa** ugantum na dethā"ti ? pucchi. "Āma, maharājā"ti.'

(MA iii.83)

²³ Ordinarily speaking this would be *torches*. But the literary *brands* has been preferred as there are several subsequent references to *torches* of the modern electrical type. (Please see also p.36)

lowed **dawn** (*aruṇa*) to arise?” “Yes, |
Your Majesty, it is I.”’

In the *Sutta Nipāta Commentary*, which gives the same account, the clause ‘*from such a time onwards dawnrise does not appear*’ is substituted with:

‘From such a time onwards **the night does not become light** (*ratti na vibhāyati*). | ‘*Tato ratti na vibhāyati. Andhakāro*
Darkness (*andhakāro*) prevails.’ *jāto.*’ (SnA i.190)

That Commentary adds: ‘at this the people were afraid (*bhītā*).’

The correlation and synonymity between ‘**dawnrise**’ (*aruṇuggamana*) and ‘**the night becomes light**’ (*ratti vibhāyati*) is here again apparent. Earlier (p.29ff), their synonymity in the *positive* sense was established:

dawnrise = the night becomes light = light.

Now their synonymity in the *negative* sense has been established:

no dawnrise = the night does not become light = darkness.

What can be concluded from the Commentarial passages under discussion, is that so long as dawn has not arisen, so long is it dark. Darkness is the absence of light and visibility. In the case of night darkness, it is the absence of sunlight and natural visibility. The absence of sunlight and natural visibility is thus clearly a feature of night (*ratti*), not of dawnrise (*aruṇuggamana*), and thus not of a new day (*divā*).

The Nārada and the Mātāṅga incidents reveal further that the peoples of ancient India depended on sunlight. Without sunlight, at the accustomed hour of dawnrise, they would as seen, feel vexed, alarmed and afraid; hence the public outcry and the demand: ‘King, ... make dawn rise for us!’

With the rise of dawn, however, and the night becoming light, it is almost commonplace to observe that human beings, then and now, feel joy. This trait in human beings finds expression in the previously mentioned Pāli term *nandimukhī ratti* (night with a joyful face)²⁴. The term is, as already discussed, nothing other than a more vivid way of referring to the sunlight at dawnrise. The aforementioned *Udāna Commentary*’s gloss of the term speaks further of how ‘beings living dependent on sunlight’ feel joy at the rise of dawn, when the night becomes light. To repeat the gloss:

²⁴ Please see p.30

‘... due only to the rise of dawn and radiance of dawn (*aruṇappabhā*) did the night appear to have a face that brings **joy** to beings living dependent on sunlight. The meaning is that it [the night] **became light** (*vibhātamānā*).’ (UdA 124)

As also mentioned earlier²⁵, an even more vivid expression of how especially human beings react to the sunlight at dawnrise can be found in also, for example, ancient Vedic literature. To repeat:

Shining forth, the Sun rises from the laps of the dawns (*Uśas*), greeted with **gladness** by singers. (A Vedic Reader)

And at the light of dawn, birds too break into song, with their ‘dawn chorus’.

It might be suggested that were the *sunlight* that appears at dawnrise only negligible, if not absent, the joy of humans and the song of birds would be correspondingly muted. Since this may be said to be not the case, the sunlight at dawn must then, in fact, be of a considerable degree.

Dawnrise

It may in summary be understood from the passages above that when dawnrise occurs,

- it is not dark;
- there is no need to feel vexed, alarmed and afraid of ghosts etc.;
- there is no need of artificial light;
- the night has become light;
- there is a delimitation between night and day; and
- work can be carried out by natural light, at the accustomed hour and in the ordinary and natural way.

Further facts regarding the effects of dawnrise (*aruṇuggamaṇa*) can be gleaned from the Pāli Texts. They are:

- there is no need of artificial light;
- it is day;
- work can be carried out by natural light;
- travel can take place by natural light at dawnrise; or
- when the night has become light; and even
- attending to one’s toilet etc. takes place by natural light.

²⁵ Please see p.31

No Need of Artificial Light at Dawnrise

A passage in the *Cariyāpīṭaka Commentary*, which describes how there is no need of artificial light at dawnrise, concerns, once again The Bodhisatta Gotama in a past life; this time as the generous King Nimi. It describes how he had organized almsgiving at five almshouses:

<p>‘King Nimi ... had five almshouses built ... and starting at dawnrise (<i>aruṇuggaṃ ādiṃ katvā</i>) he gave alms till the time of entering [the almshouses] naturally (<i>pakatiyā</i>). Afterwards hundreds of lamps were lit. Whenever the needy arrived, alms would be given to them.’</p>	<p>‘<i>Nimirājā ... pañca dānasālāyo kāretvā ... aruṇuggaṃ ādiṃ katvā, yāva pakatiyā pavesanakālo, tāva dānaṃ pavatteti. Itarasmimpi kāle anekasatapadīpā jhāyanti. Yadā yadā atthikā āgachanti, tadā tadā [dānaṃ] dīyateva.</i>’ (CpA 53)</p>
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It can be understood from this passage that the time of entering the almshouses **naturally** (*pakatiyā*) was *from dawnrise to, say, sunset*, i.e. during the day. Lamps were not lit at this period. They were lit **afterwards** *from sunset to dawnrise*: during the night. For, day and night are defined in the *Dīgha-nikāya Commentary*’s discussion of The Buddha’s explanation how ‘When the moon and sun arose in the world ... then were nights and days distinguished.’ (D iii.85):

<p>‘Nights and days means: [i] from sunset till dawnrise (<i>yāva aruṇuggamanā</i>) the night (<i>ratti</i>), and [ii] from dawnrise (<i>aruṇuggamanato</i>) till sunset the day (<i>divā</i>), thus were nights and days distinguished.’</p>	<p>‘Rattindivā’<i>ti</i>: [i] <i>suriyatthaṅgamanato yāva aruṇuggamanā ratti</i>, [ii] <i>aruṇuggamanato yāva suriyatthaṅgamanā divā</i>’<i>ti</i>, <i>evaṃ rattindivā paññāyimsu.</i>’ (DA iii.868)</p>
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Dawnrise functions thus as the beginning of day, and as the end of night. This is found in also the Canonical two-fold division of day as:

- (i) morning (*purebhattaṃ*, lit. early meal), and
- (ii) afternoon (*pacchābhattaṃ*, lit. late meal).

This division is defined in the *Vinaya-pīṭaka*:

<p>(i) ‘Morning means: from dawnrise till noon.’ (ii) ‘Afternoon means: when noon has</p>	<p>(i) ‘<i>Purebhattaṃ nāma: aruṇuggaṃ upādāya yāva majjhantikā.</i>’ (ii) ‘<i>Pacchābhattaṃ nāma majjhantike vī-</i></p>
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passed till **sunset**.’

| *tivatte yāva atthaṅgate suriye.*’ (Vin iv.272f)

The function of dawnrise as the beginning of day is confirmed in the *Vimativinodani Subcommentary*:

‘**Dawnrise** (*aruṇuggamana*) is the beginning of the day (*divasa*).’

| ‘*Aruṇuggamanaṃ divasassa ādibhūtaṃ.*’
(Vmṭ 1.311)

The function of dawnrise as the end of night when the last watch passes, is found in the Canonical account, given above (p.23f), of when the Venerable Ānanda requests The Buddha to recite the *Pātimokkha*:

‘**At the waning of the night, when the last watch had passed, when dawn arose**, when the night had a joyful face, for the third time did the Venerable Ānanda speak thus to the Exalted One: “... Let the Venerable One recite the *Pātimokkha*.”’

| ‘*Tatīyampi kho āyasmā Ānando abhikkantāya rattiyā, nikkhante pacchime yāme, uddhaste aruṇe, nandimukhiyā rattiyā, Bhagavantaṃ etadavoca: “... Uddisatu, bhante, Bhagavā pātimokkhan’ti.”*’
(Vin ii.236; A iv.205; Ud 52)

Dawnrise’s functions as the beginning of day (*divasa*) and end of night (darkness) can be understood from also the ‘key’ to the *Abhidhānappadīpikā* Dictionary and the *Kaccāyana-dhātumañjūsā* Pāli Grammar in their explanation of *divā* (day):

‘Darkness (*andhakāra*) perishes, passes away by it: *divā* (day); from *ḍī* in the sense of passing away (*khaye*). The teachers, however, explain the meaning of the word *divā* (day) according to the root *divu*: “It becomes effulgent, it is luminous: *divū*.”’²⁶

| ‘*Dīyati, khīyati andhakāro etenā’ti divā; ḍī khaye. Ācariyā pana “dibbati, obhāsati’ti divā”ti, divu dhātuvasena divāsaddassa atthaṃ samvaṇṇenti.*’
(Abhps 17; Kac)

Either explanation, be it of darkness passing away or of effulgence and luminosity, indicates that *divā* (day), which begins at dawnrise, is incompatible with darkness (*andhakāra*). Darkness is clearly a feature of night (*ratti*) and not of day (*divā*). When it is night, therefore, lamps are necessary to dispel night’s darkness and gain visibility.

²⁶ *Divā* and *divasa* both meaning ‘day’ have the common base *diva* (day). Please see P.E.D. Cf. also: ‘*Divā-saddo divā-saddo viya divasa-pariyāyo.*’ (The term *diva* like *divā* is synonymous to *divasa*.)
(St i.192)

This is illustrated in, for example, the Canonical passage from the *Vinaya-piṭaka* that explains why The Buddha allowed monks to use lamps within the monastery:

<p>‘... monks going to the Observance-hall at night, in the dark (<i>rattiyā andhakāre</i>), trod upon tree-stumps and thorns, and hurt their feet. They told this matter to the Exalted One. He said: “I allow you, monks, ... to use a lamp within the monastery” ’</p>	<p>‘... <i>bhikkhū rattiyā uposathaggampi ... gacchantā andhakāre khāṇumpi, kaṇṭakampi akkamanti. Pādā dukkhā honti. Bhagavato etamatthaṃ ārocesuṃ: “Anujānāmi, bhikkhave, ajjhārame ... padīpaṃ dhāretuṃ” ’</i> (Vin i.188)</p>
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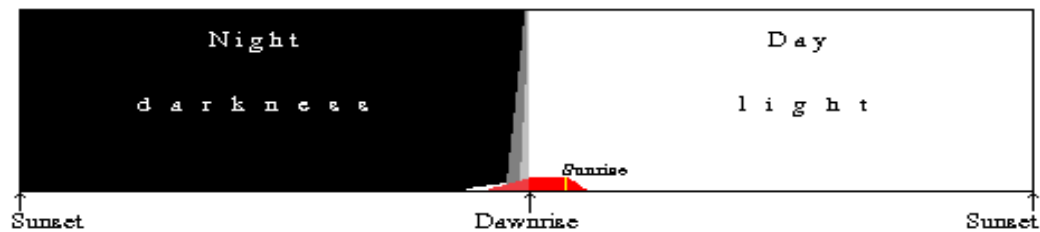
The light obtained from lamps is, needless to say, not natural: it is artificial. But as was mentioned above, when dawnrise occurs it is not necessary to use lamps etc. The natural light coming from the sun has at this time diffused to all four quarters. The night has become light; day (*divā*) has begun; darkness has perished and thus tree-stumps and thorns are naturally visible.

The fact that lamps are no longer necessary at dawnrise (day), but are necessary prior to dawnrise (night) was evident already in the aforementioned explanation of how the generous King Nimi organized his almshouses: ‘... **starting at dawnrise** (*aruṇuggaṃ ādiṃ katvā*) he gave alms till the time of entering [the almshouses] naturally (*pakatiyā*). **Afterwards** hundreds of lamps were lit.’ Hence,

i) ‘**Starting at dawnrise till the time of entering [the almshouses] naturally**’ means: At dawnrise and for the rest of the day people would enter the almshouses naturally, by natural daylight, and lamps or other artificial light was not necessary.

ii) ‘**Afterwards hundreds of lamps were lit**’ means: After sunset, at dusk, at night, in the dark, till next dawnrise the people needed lamps etc. artificial light.

Fig. 29 Night (darkness) / Day (light)



It Is Day at Dawnrise

Quite a number of passages in the Pāli Texts show not only that dawnrise is the beginning of day but also that it is part of day itself. What those passages show is that dawnrise occurs ‘next day’ (*puna-divase*) after the whole night (*sabba-ratti*) is over, that it is not part of night. A such passage is, for example, the *Āṅuttara-nikāya Commentary*’s account of when the Nāga-king Paṭhavindhara invited Buddha Padumuttara to his mansion and honoured Him the whole night (*sabbaratti*):

‘He [the Nāga-king Paṭhavindhara] ... invited Buddha Padumuttara ... and honoured and venerated Him **the whole night** (*sabbaratti*). **Next day** (*punadivase*), **when dawn arose** (*uṭṭhite aruṇe*), The Teacher [The Buddha] addressed his attendant, the Elder Sumana, saying: “Sumana, The Tathāgata will **today** (*ajja*) go to a distant place for His alms-round.” ’

‘So [Paṭhavindhara Nāgarājā] ... Padumuttaradasabalaṃ nimantetvā ... **sabbarattiṃ** sakkārasammānaṃ sajjesi. Satthā **punadivase, uṭṭhite aruṇe** attano upaṭṭhākaṃ Sumanattheraṃ āmantesi: “Sumana, **ajja** Tathāgato dūraṃ bhikkhācāraṃ gamissati.” ’ (AA i.253)

The term *ajja* (today) is explained in the *Dīgha-nikāya Subcommentary*:

‘The term *ajja* (today) refers to the period from one dawnrise (*aruṇuggamana*), which is related to **day** (*divasanissita*), to the next dawnrise (*aruṇuggamana*).’

‘*Tan-divasa-nissita-aruṇuggamanato paṭṭhāya puna aruṇuggamanā, etthantare ajja-saddo pavattati.*’ (Dī ii.191)

As seen, dawnrise (*aruṇuggamana*) is thus related to **day** (*divasa-nissita*), not to night (*ratti-nissita*). That is why in the *Āṅuttara-nikāya Commentary*’s above account of the Nāga king honouring Buddha Padumuttara said: ‘**Next day** (*punadivase*), **when dawn arose** (*uṭṭhite aruṇe*)’.²⁷

A second passage which shows that dawnrise occurs ‘next day’ (*punadivase*), after the whole night (*sabbaratti*) is over, is found in the *Saṃyutta-nikāya Commentary*’s account of the Parinibbāna (complete passing away) and funeral of the Elder Aññā-

²⁷ Please see p.28 for a discussion regarding the synonymity between **dawnrise** (*aruṇuggamana*) and **when dawn arose** (*uṭṭhite aruṇe*).

Koṇḍañña. It specifies what time the bhikkhus put out his funeral pyre and placed his relics in the hands of The Buddha:

<p>‘Five hundred bhikkhus came through the air and chanted the whole night (<i>sabbaratti</i>). Next day (<i>punadivase</i>), just at the time of dawnrise (<i>aruṇuggamanavelāyameva</i>) they put out the funeral pyre ... and placed the relics ... in the hands of the Teacher.’</p>	<p>‘<i>Pañca bhikkhusatāni ākāsenāgantvā sabbarattiṃ sajjhāyamakaṃsu. ...Punadivase, aruṇuggamanavelāyameva citakam nibbāpetvā ... dhātūnaṃ ... Sathū hatthe thapayimsu.</i>’ (SA i.284)</p>
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A third passage, which indicates that dawnrise occurs ‘next day’ (*punadivase*), after the night is over, is found in the *Jātaka Commentary*. It concerns the former Bodhisatta Gotama as the Prince Sutasoma, who went forth from home to homelessness. The passage gives details as to what time he did so:

<p>‘The Bodhisatta ... slept that night (<i>taṃ rattiṃ</i>) at home itself, and next day (<i>punadivase</i>), at the time of dawnrise (<i>aruṇuggamanavelāya</i>) worshipped his parents ... and left the city ...’</p>	<p>‘<i>Mahāsatto ... taṃ rattiṃ niveseneva sayitvā punadivase, aruṇuggamanavelāya mātāpitaro vanditvā ... nagarā nikkhamma</i>’ (JA v.487)</p>
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A fourth passage is again in the *Aṅguttara-nikāya Commentary*. It concerns the ogre Ālavaka, who after unsuccessfully having tried to subjugate The Buddha, asked Him eight questions. The passage specifies when Ālavaka did so, and what happened next:

<p>‘Unable to do anything the whole night (<i>sabbaratti</i>) ... Ālavaka approached the Teacher and asked Him eight questions. ... Next day (<i>punadivase</i>), when dawn arose (<i>uṭṭhite aruṇe</i>) ... they [the people of Ālavā] told the matter to the king.’²⁸</p>	<p>‘<i>Ālavako pana sabbarattiṃ ... kiñci kātuṃ asakkonto Sathāraṃ upasaṃkamitvā aṭṭha pañhe pucchi. ...Punadivase, uṭṭhite aruṇe ... rañño ārocesuṃ.</i>’ (AA i.390)</p>
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²⁸ Other passages which indicate that dawnrise occurs ‘next day’ (*punadivase*), after the whole night is over, are found in AA i.254, MA v.45 (*sabbaratti ... punadivase, uṭṭhite aruṇe*), and AA i.335, 391 (*punadivase, aruṇe uṭṭhite*), etc.

Work Can Be Carried Out by Natural Light at Dawnrise

Indirectly, a passage in the *Dīgha-nikāya Commentary* explains how one can at dawnrise work by natural light. It describes the great radiance of a *Cakkavatti* King's Jewel. It says the emitted light by the Jewel is like the light at dawnrise (*aruṇuggamanavelāya*). If the Jewel is displayed at night, people think it is day (*divā*), and start working. The extent of the Jewel's radiance is also given:

'A Jewel comes from the mountain Vepulla to the *Cakkavati* King. They place it in a net of pearls, and with a series of bamboos [one on top of the other] lift it sixty cubits up in the air. At night its radiance (*ābhā*) spreads to an area of an entire *yojana*²⁹ around, and it grows light in that area **as at the time of dawnrise** (*aruṇuggamanavelāya viya*). Hence, farmers **engage in their work** of ploughing, dealers open their shops, and each craftsman engages in this or that work, thinking 'it is **day**' (*divā*).'³⁰

'*Raṇṇo Cakkavatissa ... Vepullapabbata-to maṇiratanaṃ āgacchati. Tassevaṃ āgatassa muttājālake ṭhapetvā veṇuparamparāya saṭṭhihathappamānaṃ ākāsaṃ āropitassa rattibhāge samantā yojanappamānaṃ okāsaṃ ābhā pharati, yāya sabbo so okāso aruṇuggamanavelāya viya sañjātāloko hoti. Tato kassakā kasikammaṃ, vāṇijā āpanugghāṭanaṃ, te te sippino taṃ taṃ kammantaṃ pajojenti 'divā'ti maññamānā.'* (DA ii.625)

As mentioned above (p.32), the daylight effects of the 'radiance' or 'light of dawn' (*aruṇāloka*) as well as the fact that people are able to **work** by that light is described also in ancient Vedic literature. The Pāṇi and Vedic descriptions of the effects of dawn are strikingly similar. To repeat the Vedic description:

In Vedic times, the light of dawn (*aruṇāloka*) was deified as *Uśas*. *Uśas* is the goddess of Dawnrise (*aruṇodaya*). When she appears she animates and awakens humans and animals. ... **People engage in their work**. She lights up the roads. She removes the gate of darkness. (*Sinhaloa Vishvakoshaya*)

²⁹ Seven miles (P.E.D), about eleven kilometres.

³⁰ Please compare with the *Mahāsudassana-sutta*, where The Buddha says: 'Then a Jewel appeared to [the *Cakkavati*] King Mahāsudassana. The radiance of this Jewel spread an entire *yojana* around. ...Once, to test it, the King went on night-manoeuvres in the darkness of the night with his four-fold army, with the Jewel fixed to the top of his standard. People in the villages around, **engaged in their work**, thinking it was day (*divā*).' (D ii.75)

The following facts regarding dawnrise have now been established:

- natural light spreads over the surroundings;
- the darkness of night is removed; and
- considerable visibility prevails, so much so that the artificial light of lamps etc. is not required.

Due to these events, another human activity that requires light, and which at dawnrise can take place by natural light, is travel.

Travel by Natural Light at Dawnrise

A number of passages in the Pāli Texts illustrate that travel can at dawnrise take place by natural light, without artificial light. The most vivid of them is the *Dhammapada Commentary*'s very detailed account of the woman Paṭācāra's tragic journey. That account describes, as related earlier ³¹, how Paṭācāra took her two children, one of them a new-born child who was small like a piece of meat, and set out to find her husband **when dawn arose** (*vuṭṭhite aruṇe*). Her journey is given here fully until she met another traveller coming from the opposite direction:

'She ... passed the night [there] ... and **when dawn arose** (*vuṭṭhite aruṇe*) ... she **set out** (*gacchantī*) along the path her husband had taken, and **saw** he had fallen dead on the ant-hill, and that his body was blue and rigid. "All on account of me," said she, "my husband has died upon the road," and wailing and lamenting she continued her journey. [Then] she **saw** (*disvā*) the Aciravatī [river] that, due to the rain that had lasted all night (*sakalaratti*) was swollen chest-deep. Not daring to cross the stream with two children, she left the older child on the near bank, and carried the younger across to the far bank. Spreading out the branch of a tree, she laid the child on it. Then, thinking to herself, "I must return to my

'Sā ... *rattiṃ vītināmesi ... vuṭṭhite aruṇe ... sāmikassa gatamaggena gacchantī, taṃ vammikamatthake kālaṃ katvā patitaṃ nīlavanṇaṃ, taddhasarīraṃ disvā "maṃ nissāya mama sāmiko panthe matto"ti, rodantī paridevantī pāyāsi. Sā sakalarattiṃ devena vaṭṭatā Acirarattiṃ thanappamānena udakena paripuṇṇaṃ disvā, attano mandabuddhitāya dvīhi dārakehi saddhiṃ udakaṃ otarituṃ avisahantī jeṭṭhaputtaṃ orimatīre thapetvā itaraṃ ādāya paratīraṃ gantvā sākābhāṅgaṃ attharivā nipajjāpetvā "itarassa santikaṃ gamissāmī"ti ... pāyāsi. Athassā nadīmajjhaṃ gatakāle eko seno taṃ kumāraṃ disvā "maṃsapesī"ti, saññāya ākāsatō bhassi. Sā taṃ puttassatthāya bhassantaṃ disvā ubho hatthe ukkhipivā*

³¹ Please see p.34

other child,” ... she turned to recross the river. She had barely reached midstream, when a hawk (*sena*) saw (*disvā*) the young child, and mistaking it for a piece of meat, swooped down from the sky after him. She **saw** (*disvā*) the hawk swooping down after her child, raised her hands and cried out loudly, “Begone, begone! (*Su, su!*)” Three times she cried, but the hawk was so far away that he failed to hear her, and seizing the child, [the hawk] flew up into the air with him.

When the older child, who had been left on the near bank, **saw** (*disvā*) his mother stop in the middle of the river and wave her arms, and heard her cry out loudly, he thought to himself, “She is calling me.” And in his haste he fell into the water. In this wise did a hawk carry off her younger child, and her older child was swept away by the river.

She ... wailed and lamented, and as she proceeded on her way, she **saw** (*disvā*) a man coming from Sāvatti. She asked him, “Sir, where do you live?” “In Sāvatti, madam,” he replied.’

“*sū, sū!*”*ti, tikkhattuṃ mahāsaddaṃ nicchāresi. Seno dūrabhāvena taṃ asutvāva kumārakaṃ gahetvā vehāsaṃ uppatitvā gato.*

Orimatīre ̣hitaputto mātaraṃ nadīmajjhe ubho hatthe ukkhipitvā mahāsaddaṃ nicchārayamānaṃ disvā “maṃ pakkosati” ti, saññāya vegena udake pati. Itisā bālaputtaṃ seno hari, jeṭṭhaputto udakena vūlho.

Sā ... rodantī paridevantī gacchamānā Sāvattitho āgacchantaṃ ekaṃ purisaṃ disvā pucchi: “kattha vāsikosi, tātā”ti? “Sāvattihvāsikomhi, ammā”ti.’ (DhA ii.263)

Paṭācāra’s journey commenced only after **dawn arose** (*vuṭṭhite aruṇe*). She took her two small children at dawnrise, set out to find her husband, and had the courage to cross a chest-deep swollen river while carrying her new-born child. It is perhaps difficult to imagine she would undertake such a journey in the darkness of night. That is why it is not surprising that the two previously mentioned versions of Paṭācāra’s journey³² say she undertook it after the whole night (*sabbaratti*) had passed, after it had grown light (*āloke sañjāte*) and after the night had become light (*vibhātaya rattiya*). Moreover, it was a hawk that carried off the new-born child, and hawks are *diurnal* birds, which never prey at night.³³

³² Please see p.34f

³³ ‘HAWK, a name applied generally to any *diurnal* bird of prey belonging to the families Accipitridae and Falconidae.’ (*Encyclopedia Britannica*, 1961)

Another passage in the Pāli Texts which also illustrates that travel at dawnrise can take place by natural light, is the Canonical account of The Buddha's Parinibbāna, near Kusināra. According to the *Dīgha-nikāya Commentary*, The Buddha's Parinibbāna took place during the final part of the last watch of the night, that is, at 'almost dawnrise' (*balava-paccūsa*)³⁴. The Canonical account describes how immediately after The Buddha's Parinibbāna there was an earth tremor. Then Brahma Sahampati, Sakka, and the Venerables Anuruddha and Ānanda each uttered a verse while monks and deities still not free from passions began to weep. The Venerable Anuruddha spoke then to the monks about the transience of all composites. For 'the remainder of night' (*rattāvasesaṃ*), he and the Venerable Ānanda discussed Dhamma. Then the Venerable Anuruddha told the Venerable Ānanda to go into Kusināra:

'... the Venerable Anuruddha and the Venerable Ānanda spent **'the remainder of night'** (*rattāvasesaṃ*) engaged in a Dhamma discussion. **Then** (*atha kho*) the Venerable Anuruddha said to the Venerable Ānanda: "Go ... friend Ānanda, into Kusināra" "Yes, Venerable Sir" replied the Venerable Ānanda. He dressed himself in the earlier period of the day (*pubbañhasamaya*)³⁵... and entered Kusināra.'

'... āyasmā ca Anuruddho, āyasmā ca Ānando taṃ *rattāvasesaṃ* dhammiyā kathāya vītināmesuṃ. **Atha kho** āyasmā Anuruddho āyasmantaṃ Ānandaṃ āmanatesi: "Gacch'āvuso, Ānanda, Kusināraṃ ..." "Evaṃ, bhante"ti kho āyasmā Ānanda āyasmato Anuruddhassa paṭissutvā *pubbañhasamayaṃ nivāsetvā ... Kusināraṃ pāvīsi.*' (D iii.158)

The *Dīgha-nikāya Commentary's* analysis of the terms in this sutta explains:

'The remainder of night' (*rattāvasesaṃ*) means — since [The Exalted One] passed into Parinibbāna at 'almost dawnrise' (*balavapaccūssa*) — the rest of the night, the little part of the night (*cullak'addhānaṃ*).³⁶

Engaged in a Dhamma discussion means that ... they spent [the remainder of night (*rattāvasesaṃ*)] engaged in a dis-

'Rattāvasesan'ti — *balavapaccūsse parinibbutattā* — *rattiyā avasesaṃ, cullakaddhānaṃ.*

Dhammiyā kathāyā'ti ... *maraṇapaṭisaṃyuttāya kathāya vītināmesuṃ. Tesāṃ hi taṃ kathaṃ kathentānaṃ muhuttan'eva*

³⁴ Please see above (p.23) for a discussion of *paccūsa* (towards dawnrise). *Balava-paccūssa* (almost dawnrise) occurs **during the final part of the last watch** (*pacchima-yāma'āvasāne pana balavapaccūse*). (SA i. 313; Sdī iii.397) (Please see also Fig.30, p.73).

³⁵ Please see discussion p.101ff

³⁶ Please see Fig.30, p.73.

cussion about death. For, while they were discussing this, **dawn arose within a short time** (*muhutten’eva aruṇaṃ uggacchi*).

Then (*atha kho*) means: the Elder [Anuruddha] saw (*disvā’va*) **dawnrise** (*aruṇuggamaṇaṃ*) just then, and then said to the Elder [Ānanda] [‘**Go**, friend Ānanda ...].’

aruṇaṃ uggacchi.

Atha kho ’ti aruṇuggamaṇaṃ disvā’va Thero Theraṃ etadavoca.’ (DA 418)

This analysis explains how the Venerables Anuruddha and Ānanda discussed Dhamma during ‘the remainder of night’ (*rattāvasesaṃ*), and how within a short time dawn arose. Only when the Venerable Anuruddha saw **dawnrise** did he tell the Venerable Ānanda to go into Kusināra, after which the Venerable Ānanda went.

Dawnrise marks thus the end of ‘the remainder of night’ (*rattāvasesaṃ*). This matches the aforementioned case of King Cūḷanī³⁷. To repeat:

‘Then, **after the lapse of that night** (*tassā rattiyā accayena*), leading his army, King Cūḷanī came up to that city. Explaining this incident the Teacher [The Buddha] said:

“Having kept watch **the whole night** (*kasiṇaṃ rattim*)
The powerful king Cūḷanī
When dawn had arisen
(*udentaṃ aruṇuggasmiṃ*)
Came up to the city Upakāri.”’

’Atha tassā rattiyā accayena Cūḷanīrājā senaṅgaṃ vicārayamāno taṃ nagaraṃ upāgami. Tamatthaṃ pakāsento Satthā āha:

*“Rakkhitvā kasiṇaṃ rattim
Cūḷanīyo mahabbalo
Udentam aruṇuggasmiṃ
Upakāriṃ upāgami.”’* (JA vi.448)

As mentioned previously³⁸, the *Jātaka Commentary*’s subsequent word analysis of the term ‘the whole night’ (*kasiṇaṃ rattim*) explains:

‘There, **kasiṇaṃ rattim** (the whole night) means: the entire night (*sakalaṃ*), without remainder (*nis’sesaṃ*).’

’Tattha, kasiṇaṃ rattin ’ti: sakalaṃ, nis-sesaṃ.’ (JA vi.448)

Thus, ‘Having kept watch **the whole night** (*kasiṇaṃ rattim*), the powerful king Cūḷanī, **when dawn had arisen** came up to the city Upakāri’, means that the ‘whole

³⁷ Please see p.36

³⁸ Please see p.36f

night, the entire night, **without remainder**’ (*nis’sesaṃ*) ends when dawn arises. Hence, dawnrise marks the end of ‘the remainder of night’ (*ratt’āvasesaṃ*). This is in agreement with the previously mentioned Commentarial definitions of night and day:

‘From sunset to dawnrise (*aruṇuggamana*) is night’, and
‘Dawnrise (*aruṇuggamana*) is the beginning of the day (*divasa*).’³⁹

Furthermore, just as the Pāli Texts tell us ‘the remainder of night’ (*rattāvasesaṃ*) ends with dawnrise, so do they tell us it ends with the simultaneous phenomenon of ‘the night becomes light’ (*vibhātā ratti*). The Pāli Texts tell us this in the *Petavatthu Commentary*, when discussing the time King Pasenādi of Kosala had his portentous dream about the world in the future. Not knowing what the dream meant, the king was afraid for his life, and he sought clarification from his Brahmin headpriest as soon as the ‘remainder of night’ (*rattāvasesaṃ*) had passed and the night had become light (*vibhātāya rattiya*):

<p>‘King [Pasenādi Kosala] ... passed the remainder of night (<i>rattāvasesaṃ</i>) with difficulty, and when the night became light (<i>vibhātāya rattiya</i>) he summoned his headpriest and related the incident.’</p>	<p>‘Rājā [Pasenadi Kosala] ... taṃ rattāvasesaṃ dukkhena vītināmetvā, vibhātāya rattiya purohitaṃ pakkosāpetvā taṃ pavattiṃ kathesi.’ (PvA 280)</p>
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Here again, the correlation and synonymity between ‘dawnrise’ (*aruṇuggamana*) and ‘the night becomes light’ (*ratti vibhāyati*) is apparent: ‘the remainder of night’ (*rattāvasesaṃ*) ends with **dawnrise** and **the night becoming light**.⁴⁰ It is thus when the night had become light at dawnrise that Venerable Anuruddha saw light in the surroundings and told Venerable Ānanda to go into Kusināra, after which Venerable Ānanda went into Kusināra; and similarly when King Cūḷāni led his army and came up to the city Upakāri.

Almost dawnrise (*balava-paccūsa*), the time given for The Buddha’s Parinibbāna (discussed above p.69), too ends when the next day (*punadivase*) begins and dawn has arisen. That is why travel is at this time possible without artificial light. An example of this is found in the *Dhammapada Commentary*:

<p>‘At almost dawnrise (<i>balava-paccūsa-maya</i>) The Exalted One ... while surveying the world with His Buddha-eye spread the net of His knowledge. ... He</p>	<p>‘Bhagavā balavapaccūsasamaye ... <i>Buddhacakkhunālokaṃ olokento... nāṇajālaṃ patthari.</i> ... “Mahādhammābhisamayo bhavissatī”ti nātvā, punadivase katasarī-</p>
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³⁹ Please see p.61f for these two definitions.

⁴⁰ Please see Fig.30, p.73.

came to know that “Many would obtain Comprehension of Dhamma”, and **next day** (*punadivase*) attended to His toilet, and accompanied by a large group of bhikkhus, He **entered** Sāvatti for alms.’

*rapaṭijaggano mahāb-
hikkhusaṅghaparivuto Sāvattiṃ piṇḍāya
pāvisi.*’ (DhA i.26f)

A passage from the *Jātaka Commentary* too shows that travel can take place without artificial light next day (*punadivasa*), at dawnrise. It concerns the time when, requested by The Buddha, the Venerables Sāriputta and Moggalana took the five hundred bhikkhus from Devadatta and brought them to the Veḷuvana:

‘They [the Venerables Sāriputta and Moggalana] ... **next day** (*punadivasa*), **at the time when dawn arose** (*aruṇuggamanavelāya*) took the bhikkhus and **went** to Veḷuvana.’

‘Te [Sāriputta-Moggalanā] ... punadivase te bhikkhū ādāya aruṇuggamanavelāya Veḷuvanameva āgamamsu.’
(JA i.142)

The *Majjhima-nikāya Commentary* provides another example of how travel at dawnrise can take place without artificial light. It concerns the clansman Pukkusāti who spent the night in a potter’s shed together with The Buddha. When The Buddha gave him a discourse, he became a non-returner, after which he set out to look for a bowl and robes so as to get ordained:

‘The clansman [Pukkusāti] **set out** to look for a bowl and robes. What time did he set out? **When dawn arose** (*uṭṭhite aruṇe*).’

‘[Pukkusāti] kulaputto pattacīvaraparivesanaṃ pakkāmi. Kāya velāya pakkāmi? Uṭṭhite aruṇe.’
(MA v.61)

The *Mahāvamsa* provides a third example of travel at dawnrise without artificial light. It concerns a General who, when dawn arose, set out to make battle with thousands of warriors:

‘With much effort [The General],
Prepared his army at night,
And **when dawn arose** he ascended
An elephant that had been made
ready.
He **went out** through
one of the [city] gates
And striking like lightning,

*‘[Senāpati] saussāho
Balaṃ sajjīya rattiyaṃ
Uggate aruṇe hatthim-
āruyha katakammaṃ.

Dvārenekena nikkhama
Patanto asanī viya
Saddhiṃ yodhasahashehi*

Made battle hard to endure
With thousands of warriors.’

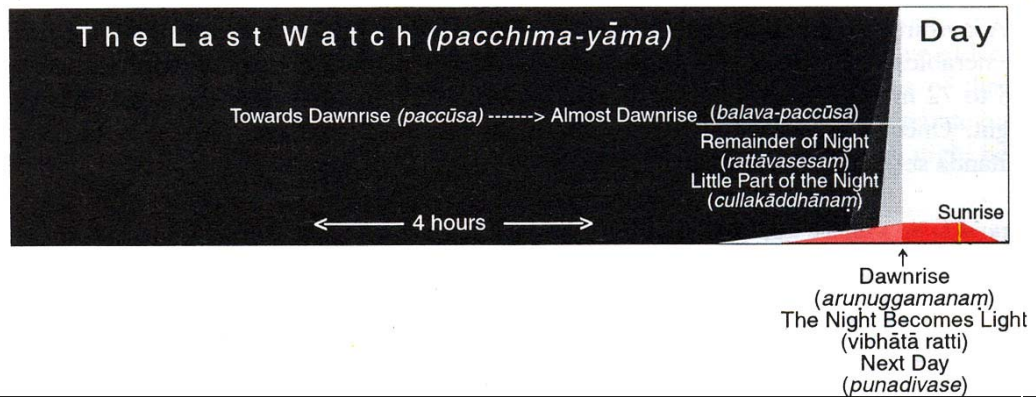
Saṅgāmaṃ’kāsi dussahaṃ.’
(Mvṃ 303)

Dawnrise serves in this way as a clear gauge according to which all these persons commence travel: they travel without artificial light; by natural light.

Dawnrise and the Last Watch

An outline of terms related to **dawnrise** (*aruṇuggamaṇa*) and **the last watch** (*pacchima-yāma*) is given below, after which some of the terms are defined.

Fig. 30 Dawnrise and the Last Watch



Definition of Terms

Yāma (watch)

According to the Canonical and Post-Canonical Texts, the night is divided into three *yāma* (watches):

paṭhama-yāma (first watch) | *majjhima-yāma* (middle watch) | *pacchima-yāma* (last watch)⁴¹

‘A *Yāma* (watch) comprises four English hours’ (standard 24-hour-day hours).⁴²

Rattāvasesam (the remainder of night)

Found in, for example, the *Dīgha-nikāya*’s above-mentioned account of the aftermath of The Buddha’s Parinibbāna, *rattāvasesam* (the remainder of night) is the period, shortly before dawnrise, at which the Venerables Anuruddha and Ānanda were engaged in a Dhamma discussion. The *Dīgha-nikāya Commentary* explained (p.69):

⁴¹ Please see Vin ii.236; A ii. 119, etc. This ancient threefold-fold division of night into watches matches the three nautical watches used even today on merchant and navy ships: ‘SHIP’S BELLS The mariner’s 24-hour day is divided into six watches, each four hours long.’ (*Encyclopedia Britannica*, 1961)

⁴² *A Sinhalese-English Dictionary*, C. Carter, M.D. Gunasena & Co.LTD.,Colombo, 1965

‘*Rattāvasesaṃ* (the remainder of night) means: ... *cullak’addhānaṃ* (the little part of the night). ... For, while they were discussing, **dawn arose** within a short time.’ (DA 418)

Cullak’addhānaṃ (little part of the night)

Cullak’addhānaṃ (little part of the night), is defined by the *Dīgha-nikāya Subcommentary*:

‘*Cullak’addhānaṃ* (little part of the night) means: | ‘*Cullakaddhānaṃ’ti: parittaṃ kālaṃ, dvitti-*
a short time, a period of two to three *nāḍikā*.’ | *nāḍikā-mattaṃ velaṃ.*’ (Dṭ 240)

Nāḍikā (no English equivalent)

‘*Nāḍikā* means Indian hour of twenty-four [English] minutes’.⁴³

Thus ‘two to three *nāḍikā*’ means: a period of approximately 48 to 72 minutes. This is the period of *rattāvasesaṃ* (the remainder of night).

According to the above definition of *rattāvasesaṃ* (the remainder of night), the Venerables Anuruddha and Ānanda started their Dhamma discussion approximately 48 to 72 minutes before dawnrise, that is, 48 to 72 minutes before the night became light. Once it was dawnrise, once the night had become light, did the Venerable Ānanda set out for Kusināra.

Travel to be Avoided until Dawnrise

Dawnrise is also the time when a monk should, in case of dangers, first set out from his forest abode. This piece of advice is found in the *Commentary*’s discussion of the *Vanapattha-sutta* in *Majjhima-nikāya*. There The Buddha speaks of a monk who resides in the forest, and who is in the grave predicament of being neither able to meditate, nor able to get his requisites easily. In such a case, says The Buddha, the monk should review his predicament, and then ‘leave that forest, be it night-time or day-time; he should not reside there,’ (M i.105). The said Commentary gives further details:

‘Should he, in that case, review and realize [his predicament] at night-time, he should leave that very night. [But] if there is danger from wild animals and so forth at night, he should wait till dawnrise.’ | ‘*Ettha ca rattibhāge paṭisañcikkhamā-*
nena ñatvā, rattinñeva pakkamitabbaṃ.
Rattiṃ caṇḍa-vālādīnaṃ paripanthe
sati, aruṇuggamanaṃ āgamitabbaṃ.’ (MA ii. 55)

The advice has to do with the monk’s safety. It is somehow safer for the monk to wait till dawnrise before leaving. In terms of danger from wild animals etc., some major change to the better takes place at dawnrise. Considering the fact that the monk,

⁴³ *ibid.* The *Sanskrit English Dictionary* says: ‘*Nāḍikā* a measure of time = ½ muhūrta (48 minutes).’ [i.e. 24 minutes]

being human, cannot see in the dark, it would seem possible to assume that the lesser danger found at dawnrise is so because the night has become light, and there is natural visibility. Before it becomes light, the monk cannot see snakes, scorpions, other dangerous animals, holes in the ground, mud, stones, roots, tree-stumps, thorny bushes, and other such dangers, including robbers etc. After it becomes light, however, one major change to the better is that there is visibility, and he can see the dangers and take precautions. Another change is that the many dangerous animals, which are active only at night, such as wild boar, rats and nocturnal snakes, will have retired once it is light. Needless to say, for there to be any advantage worth mentioning in waiting till dawnrise, the light at that time would have to be of a *considerable degree*. Otherwise, the monk would still be unable to see, for example, snakes and scorpions.

An instance of how monks would not leave their abode until the night had become light, is found in the Commentarial account of what happened once when two elders, living happily together, were visited by a third monk. He, being covetous of their abode and patrons, caused such disharmony that the two elders left. Their separate but simultaneous departure took place not in the darkness of night, but when the night became light:

<p>‘Then, both Elders ... spent the day just there, and when the night became light (<i>vibhātāya ca rattiya</i>) each went to a more pleasant place.’</p>	<p>‘<i>Atha, te ubho’pi Therā ... taṃ divasaṃ tattheva vasitvā vibhātāya ca rattiya yathāphāsukaṭṭhānaṃ agamiṃsu.</i>’ (PvA.13)</p>
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Travel by Natural Light when the Night Becomes Light

The synonymity between ‘the night becomes light’ (*vibhātāmānā ratti*) and ‘dawnrise’ (*aruṇuggamana*) may be seen in the context of travel too.⁴⁴ Travel takes place by natural light when the night becomes light, as it did at dawnrise. One example of this is from the *Therīgātha Commentary*, and concerns a merchant who travelled alone towards Rājagaha after the night became light:

<p>‘The wife of a merchant in Sāvatti conceived at the time towards dawnrise (<i>paccūsavelāyaṃ</i>). She did not know it. When the night became light (<i>vibhātāya rattiya</i>), the merchant loaded the</p>	<p>‘<i>Sāvattiyaṃ kira aññatarassa vāṇijjassa bhariyāya paccūsavelāyaṃ kuchiyaṃ gabbho saṅṭhāsi. Sā taṃ na aññāsi. Vāṇijo vibhātāya rattiya sakaṭesu bhaṇḍaṃ āropetvā Rājagahaṃ ud-</i></p>
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⁴⁴ Their synonymity was already established above by reference to other contexts: the whole night having elapsed (p.36f); natural visibility, hence objects having become visible (pp.40, 42); and it being possible to carry out work (p.66f).

goods on the cart and **travelled** towards Rājagaha.’ *dissa gato.* (ThigA 195)

Another example is from the *Mahāvamsa*, and concerns the king Māṇābharaṇa. He had an auspicious dream at night and after the night became light, he went to the village Puṅkha to relate it to his ministers etc.:

‘Then, **at the time towards dawnrise** (*paccūsakālamhi*)
The king saw in his dream
A deity of great power ...

He the king, best of men,
Woke up exhilarated,
And **when the night became light**
(*vibhātāya rattiya*)
He **went** to the village Puṅkha.
[There] he told his auspicious dream,
In the way he saw it,
To his ministers headed by the Queen.’

‘*Tato paccūsakālamhi,
Devaputtaṃ mahiddhikaṃ, ...
Supine evaṃ, adakkhī dharaṇīpati.*
...

*Pabujjhitvāna sañjāta-
Pīvego’tha rattiya
Vibhātāya tato Puṅkhagāmaṃ
Gañchi naruttamo.
Yathā diṭṭhappakāraṇaṃ,
kathesi supinaṃ subhaṃ;
mahesī pamukhānaṃ so,
amaccānaṃ mahāpati.*’ (Mvṃ 376)

A third example is from the *Suttanipāta Commentary*, and concerns the citizens of Sāketa. They went to see and welcome the Exalted One after the night became light:

‘The Exalted One ... reached the city Sāketa in the evening and entered the Añjana grove. The citizens of Sāketa heard about it and thought, “It is not the proper time (*akālo*) to see the Exalted One now.” **When the night became light** (*vibhātāya rattiya*) they took garlands, scent etc., **went** to the Exalted One, made offerings to Him, worshipped Him, exchanged greetings etc. with him, gathered round Him and waited until the Exalted One entered the village [for alms].’

‘*Bhagavā ... sāyaṃ Sāketaṃ anuppatto
Añjanavanaṃ pāvisi. Sāketavāsino su-
tvā “Akālo idāni Bhagavantaṃ dassa-
nāyā” ti, vibhātāya rattiya mālāgand-
hādīni gahetvā Bhagavato santikaṃ ga-
ntvā pūjanavandanasammodanādīni
katvā parivāretvā aṭṭhaṃsu yāva Bha-
gavato gāmappavesanavelā.*’ (SnA ii.531)

Thus ‘the night became light’ serves, as in the case of dawnrise, as a clear gauge according to which all these persons commence travel by natural light.

Another human activity that, like carrying out one’s work or travelling, requires light, and which at dawnrise can take place by natural light, is ‘attending to one’s toilet’. The Pāli Texts give the time during which this takes place.

**Attending to One’s Toilet
after the Lapse of the Night, Next Day at Dawnrise when the Night Becomes Light**

‘Attending to one’s toilet’ (*sarīra-paṭijaggana*) — washing one’s face or head, rinsing one’s mouth, emptying one’s bladder and evacuating one’s bowels, bathing, cleansing other parts of the body, getting dressed etc. — is something human beings usually do in the early hours after rising from their sleep, or in the case of meditators, after rising from their meditation. The Pāli Texts show that the time for ‘attending to one’s toilet’ does not take place in the darkness of night — at least not in ancient India.⁴⁵ It takes place,

- after the lapse of the night (*rattiyā accayena*),
- next day (*puna divase*)
- at dawnrise (*aruṇuggamanavelāyameva, aruṇe uggate etc.*),
- when the night becomes light (*vibhātāya / pabhātāya rattiyā*).

Attending to One’s Toilet after the Lapse of the Night

A passage which shows that ‘attending to one’s toilet’ takes place after the lapse of the night is from the *Jātaka* and *Apadāna Commentary*, and concerns the Bodhisatta Gotama, who the night before his Enlightenment had five great dreams:

‘The Bodhisatta had five great dreams that night ... **After the lapse of the night** (*tassā rattiyā accayena*) He **attended to His toilet** (*katasarīrapaṭijaggano*), and while waiting for the time for going for alms he returned, and early at sunrise (*pāto*)⁴⁶ sat at the foot of that tree.’

‘*Bodhisatto*’pi kho tasmim̐ rattibhāge pañca mahāsupine disvā ... *tassā rattiyā accayena katasarīrapaṭijaggano bhikkhācārakālaṃ āgamayamāno pātova āgantvā tasmim̐ rukkhamūle nisīdi.*’
(JA i.69; ApA 74)

⁴⁵ Even today it is common to see people out of doors in the early light, brushing their teeth, clearing their throats etc. in the less well-to-do neighbourhoods of Sri Lanka.

⁴⁶ Please see pp.90f, 95 for a discussion of the term ‘early at sunrise’ (*pāto*).

Another passage is the aforementioned one from the *Jātaka Commentary* about the Venerable Samiddhi who meditated all night. Only after the whole night (*sabbaratti*) was over and dawn arose did he attend to his toilet:

‘Venerable Samiddhi exerted himself the **whole night** (*sabbarattiṃ*) in meditation. **At the time of dawnrise** (*aruṇuggamanavelāya*) he bathed, dried his body, put on his inner robe, took his upper robe in his hand and stood to one side.’

‘*Āyasmā Samiddhi sabbarattiṃ padhānaṃ padahitvā aruṇuggamanavelāya nhatvā suvaṇṇavaṇṇaṃ attabhāvaṃ sukkhāpayamāno antaravāsakaṃ nivāsetvā uttarāsaṅgaṃ hatthena gahetvā aṭṭhāsi.*’ (JA ii.56)

Attending to One’s Toilet Next Day

Three passages which show that ‘attending to one’s toilet’ takes place ‘next day’ (*puna-divase*), after the night has passed, are again from the the *Jātaka Commentary*, and concern the Bodhisatta Gotama in three of the lives when He was an ascetic:

‘The Bodhisatta ... **passed the night** (*rattiṃ khepetvā*) sitting at the foot of a tree, experiencing the bliss of jhāna. **Next day** (*punadivase*) **He attended to His toilet** (*katasarīrapaṭijaggano*), entered the city in the earlier period of the day (*pubbaṅhasamaye*), and while walking for alms reached the gate of the king’s residence.’

‘*Bodhisatto ... aññatarasmiṃ rukkhamūle nisinno jhānasukhena rattiṃ khepetvā, punadivase katasarīrapaṭijaggano pubbaṅhasamaye ... nagaraṃ pavisitvā bhikkhāya caranto rañño nivāsanaadvāraṃ pāpuṇi.*’ (JA ii.272)

‘The Bodhisatta went to the foot of a tree. He **stayed there overnight** (*rattiṃ vasitvā*), and **next day** (*punadivase*) **He attended to His toilet** (*katasarīrapaṭijaggano*) and then went along the path.’

‘*Mahāsattopi ekaṃ rukkhamūlaṃ upagato. So tatha rattiṃ vasitvā punadivase sarīrapaṭijagganaṃ katvā maggaṃ paṭipajji.*’ (JA vi.62)

‘**Next day** (*punadivase*) ... The Bodhisatta ... **attended to His toilet** (*katasarīrapaṭijaggano*), adjusted his inner and outer robe of red bark ... and while walking for alms in Benares He reached the king’s house-door.’

‘*Bodhisatto ... punadivase katasarīrapaṭijaggano rattavākamayaṃ nivāsanapārūpanaṃ saṅghāpetvā ... Bārāṇasīyaṃ bhikkhāya caramāno rañño gharadvāraṃ sampāpuṇi.*’ (JA i.303)

A fourth passage is from the *Dhammapada Commentary*, and concerns The Buddha. It describes how He set out to meet Maṭṭhakuṇḍalī, the dying son of a stingy Brahmin in Sāvatti:

‘**Next day** (*punadivase*) ... The Exalted One ... **attended to His toilet** (*katasarīrapaṭṭijaggano*), and accompanied by a large group of bhikkhus, entered Sāvatti for alms and reached the Brahmin’s house-door in due course.’

‘*Bhagavā ... punadivase katasarīrapaṭṭijaggano mahāhikkhusaṅghaparivuto Sāvattiṃ piṇḍāya pavisitvā anupub-bena brāhmaṇassa gehadvāraṃ gato.*’
(DhA i.26f)

A fifth passage is from the *Dhātuvamsa*, and concerns a Paccekabuddha. It describes his setting out for alms:

‘**Next day** (*punadivase*) the Paccekabuddha came out from his mountain cave, **attended to His toilet** (*sarīrapaṭṭijagganaṃ katvā*), put on his inner robe all round, put on his big, thick, good upper robe made of rags, took his black bowl in his hands, came through the air and appeared at the door of the dwelling [of the lay-follower Caraka].’

‘*Punadivase Paccekabuddho lenato nikkhamitvā sarīrapaṭṭijagganaṃ katvā surattapallavasadisamaṃ antaravāsakaṃ parimaṇḍalaṃ katvā nivāsetvā bahala-pavaramahāpaṃsukūlacīvaraṃ pārupitvā nīlabhamaravaṇṇaṃ pattaṃ hatthena gahetvā, ākāsenā āgantvā tassa [Carakassa upāsakassa] kuṭṭidvāre pākaṭo ahoṣi.*’
(Dhātuvamsa 33)

Attending to One’s Toilet Etc. at Dawnrise

A passage which shows that ‘attending to one’s toilet’ takes place at dawnrise is from the *Majjhima-nikāya Commentary*, and concerns the previously mentioned clansman Pukkusāti (p.72) on his long journey prior to meeting The Buddha:

‘**Next day** (*punadivase*), **when dawn arose** (*uṭṭhite aruṇe*), the clansman [Pukkusāti] ... **attended to his toilet** (*sarīrapaṭṭijagganaṃ katvā*) and [then] followed again the caravan. He travelled like this one hundred and ninety-two yojanas.’

‘[Pukkusāti] kulaputto ... *punadivase uṭṭhite aruṇe sarīrapaṭṭijagganaṃ katvā, puna sathavāhaṃ anubandhati. ... Eteneva niyāmena aṭṭhahi ūnakāni dve-yojanasatāni gato.*’
(MA v.45)

A second passage is from the *Vinaya Commentary*, and concerns The Buddha in the fourth week of His Enlightenment. It describes how Sakka, the king of gods, waited on Him just at the time of dawnrise (*aruṇuggamanavelāyameva*):

‘Sakka, the king of gods, knowing The Exalted One was going to have His meal, offered Him a medicinal myrobalan nut **just at the time of dawnrise** (*aruṇuggamanavelāyameva*), on the **day** the Exalted One rose from concentration, after He had sat for a week at the foot of the Rājāyatana tree. The Exalted One partook of it [the nut]. Immediately He had a bowel movement. Sakka gave Him **water for rinsing His mouth** (*mukhodakaṃ*). The Exalted One rinsed His mouth and sat at the foot of that very tree.’

‘*Bhagavato kira Rājāyatanaṃ sattāhaṃ ekapallaṅkena nisinnassa samādhito vuṭṭhānadivase aruṇuggamanave- lāyameva “Bhojanakiccena bhavitabban”ti nātvā Sakko devarājā osadhaharītakaṃ upanesi. Bhagavā taṃ pari- bhūñji. Paribhuttamattasseva sarīraki- ccaṃ ahoṣi. Sakko mukhodakaṃ adāsi. Bhagavā mukhaṃ dhovivā tasmim ye- va rukkhamūle nisīdi.*’
(VA v.959)

A third passage is from the *Dhammapada Commentary*, and concerns The Buddha when, because the monks had for long been quarrelling over a Vinaya question, He left the Saṅgha at Kosambi to retire to solitude in the Pārileyya grove. A bull elephant, who had left his herd also to seek solitude, waited on Him ⁴⁷. The aforesaid *Commentary* tells of how the bull elephant helped The Buddha attend to His toilet, rinse His mouth etc. at the time when dawn arose (*aruṇe uggate*):

‘... the bull elephant ... thinking, “I shall protect The Teacher,” takes with his trunk a large stick to ward off danger from wild animals at night, and paces back and forth in the grove **until dawnrise** (*yāva aruṇuggamanā*) **When dawn rises** (*aruṇe uggate*), he starts by giving [The Teacher] **water for rinsing His mouth** (*mukhodakadānaṃ*), and performs accordingly all other duties.’

‘...*hatthināgo rattiṃ vālamigaparipanthanivāraṇatthaṃ mahantaṃ daṇḍaṃ soṇḍāya gahetvā, “Sathāraṃ rakkhissāmī”ti yāva aruṇuggamanā vanasaṇḍassa antarantarena vicarati. ... Aruṇe uggate Sathuno mukhodakadānaṃ ādiṃ katvā teneva upāyena sabbavat-tāni karoti.*’
(DhA i. 59)

That dawnrise (*aruṇuggamana*) occurs when the night becomes light (*vibhātamānāyā rattiya*), and that they are two features of the same phenomenon, was established in Chapter III, p.29ff. There an example from also the *Questions of King Milinda* (*Milindapañha*) was given. It described how King Milinda attended to his toilet, and bathed his head, when the night became light, when dawn arose:

⁴⁷ Mentioned in also M iii.152f, S iii.94, and Ud 41.

‘Then, **when the night became light** (*pabhātāya rattiya*), **when dawn arose** (*uddhaste aruṇe*), King Milinda bathed his head, recollected The Sammā Sambuddhas of the past, future and present and made eight vows.’

‘*Atha kho Milindo rājā pabhātāya rattiya uddhaste aruṇe sīsaṃ nahātvā, aīṭānāga-tapaccūppanne Sammā Sambuddhe anusarivā, aṭṭhavatapadāni samādiyi.*’

(Miln 90)

Attending to One’s Toilet when the Night Becomes Light

The synonymity between ‘the night becomes light’ (*vibhātāmanā ratti*) and ‘dawnrise’ (*aruṇuggamana*) may be seen in the context of ‘attending to one’s toilet’ too from several other passages from the Pāḷi Texts. Attending to one’s toilet takes place by natural light when the night becomes light, as it did at dawnrise. One passage of this is from the *Jātaka Commentary*, and concerns The Buddha on the morning of the day He tamed the drunken elephant Nālāgiri:

‘The Teacher ... in the third part of the last watch surveyed [with His Buddha-eye] those of His kinsfolk⁴⁸ who were able to be enlightened, and **when the night became light** (*vibhātāya rattiya*), **He attended to His toilet** (*katasarīrapaṭijagano*) ... and entered Rājagaha for alms.’

‘*Satthā’pi ... pacchimayāmassa ... tatiya-kotṭhāse bodhaneyya-bandave olokento ... vibhātāya rattiya, katasarīrapaṭijagano ... Rājagahaṃ piṇḍāya pāvīsi.*’

(JA v.335)

A second passage is again from the *Jātaka Commentary*. It concerns the time when ponds etc. were drying because of a drought. To save the fishes from dying The Buddha one day caused rain to fall in Sāvattthi and the whole Kosala region. On the morning of that day:

‘The Teacher ... **attended to His toilet** (*sarīrapaṭijaganaṃ katvā*) **when the night became light** (*pabhātāya rattiya*), considered the time for almsround, and accompanied by a large group of bhikkhus, He entered Sāvattthi for alms with the grace of a Buddha.’

‘*Satthā ... pabhātāya rattiya sarīrapaṭijaganaṃ katvā bhikkhācāraṇaṃ salakkhetvā mahābhikkhusaṅghaparivuto Buddhalīlāya Sāvattthiyaṃ piṇḍāya pāvīsi.*’

(JA i.330)

⁴⁸ *kinsfolk* refers here to beings who are related by way of being able to penetrate the Dhamma.

A third passage is from the *Theragāthā* and *Apadāna Commentary*, and concerns The Buddha on the morning of the day when He went to convert the Nāga king Nandopananda:

‘**When the night became light** (*pabhātāya rattiyā*) ... The Exalted One ... **attended to His toilet** (*sarīrapaṭijaganaṇ katvā*), and addressed Venerable Ānanda, saying: “Ānanda, inform five hundred bhikkhus that the Tathāgata is going to the deva world.”’

‘*Bhagavā ... pabhātāya rattiyā sarīrapaṭijaganaṇ katvā āyasmantaṇ Ānandaṇ āmantesi: “Ānanda, pañcannaṇ bhikkhusatānaṇ ārocehi Tathāgato devacārikaṇ gacchatī”ti.*’

(ThA iii.176; ApA 248)

A fourth passage is from the *Udāna (Sutta) Commentary* and *Sāratthadīpanī (Vinaya) Subcommentary*, and concerns the morning when a clansman Soṇa, desiring to go forth as a monk, approached the elder Kaccāyana:

‘**When the night became light** (*pabhātāya rattiyā*) ... He [the clansman Soṇa] **attended to His toilet** (*sarīrapaṭijaganaṇ katvā*) ... approached the Elder, told him his intentions, and asked for the Going-forth.’

‘*So [Soṇo kulaputto] vibhātāya rattiyā sarīrapaṭijaganaṇ katvā theramaṇ upasaṅkamitvā attano ajjhāsayaṇ ārocetvā pabbajjaṇ yāci.*’

(UdA 308; Sdṭ iii.297)

Summary

The Pāli Texts employ four terms to refer to the time for attending to one’s toilet:

- After the lapse of the night (*rattiyā accayena*),
- Next day (*punadivase*)
- When dawn rises (*aruṇe uggate, etc.*)
- When the night becomes light (*vibhātāya rattiyā*)

This alone would suggest that the terms are synonymous. Since, however, their synonymy has already been established, this may be seen to serve instead as corroborating evidence that one is at the time referred to by these terms surrounded by natural light: water, vessels for water, towels, a path etc. are naturally visible.

Attending to One’s Toilet Later than Dawnrise

Whereas no instance of attending to one’s toilet earlier than dawnrise etc. (which would be a night-time activity) could be found, several instances were found of it taking place at a later time, namely at:

- ‘Early hour before sunrise’ (*kālass’eva* — between dawnrise and sunrise)⁴⁸, and
- ‘Early at sunrise’ (*pāto*)⁴⁹.

One such instance is a passage describing how The Buddha attended occasionally to His toilet at ‘early hour before sunrise’ (*kālass’eva*). It is found in, for example, the *Dīgha-nikāya Commentary’s* account of when The Buddha set out with a group of bhikkhus towards the city Ātuma for almsround:

<p>‘Then, at early hour before sunrise (<i>kālass’eva</i>) the Exalted One attended to His toilet (<i>sarīrapaṭijaganaṃ katvā</i>), and accompanied by a group of bhikkhus, He set out towards the city Ātuma for His almsround.’</p>	<p>‘<i>Atha Bhagavā kālasseva sarīrapaṭi-jagganaṃ katvā bhikkhusaṅghaparivuto piṇḍāya carituṃ Ātumanagarābhimukho pāyāsi.</i>’ (DA ii.600)</p>
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A second passage describes how whenever The Buddha wanted to go for alms alone, He attended to His toilet at ‘Early at sunrise’ (*pātova*). It is found in the *Majjhima-nikāya Commentary*:

<p>‘Whenever the Exalted One wants to go for alms alone, He attends to His toilet (<i>sarīrapaṭijaganaṃ katvā</i>) early at sunrise (<i>pātova</i>), enters His dwelling, sits down and attains the fruition-attainment.’</p>	<p>‘<i>Yadā pana [Bhagavā] ekako piṇḍāya pavisitukāmo hoti, tadā pātova sarīrapaṭi-jagganaṃ katvā gandhakuṭiṃ pavisitvā dvāraṃ pidhāya phalasangāhāraṃ appetvā nisīdati.</i>’ (MA ii.164)</p>
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Concluding Remarks

In an attempt to establish what the Pāli Texts mean and do not mean by the term *aruṇuggamana* (dawnrise), the contexts within which it appears in the Pāli Texts have been examined and discussed. Those contexts have included the human activities of work, travel and toilet, and the meaning of *aruṇuggamana* (dawnrise) has been established. The next issue that needs to be addressed is how *aruṇuggamana* (dawnrise) is to be applied to the Vinaya (monastic rule). The human activity of eating will be the context in which this issue will be addressed.

⁴⁸ Please see discussion p.90f

⁴⁹ Please see discussion pp.90f, 95

Chapter V

Dawnrise and Proper / Improper Time for Eating

‘One should not eat at night, at the improper time for eating.’ (Sn v.400)

Dawnrise (*aruṇuggamana*) is, according to the Vinaya (monastic rule), the dividing-line between proper and improper time for monks to eat and, as already mentioned (Chapter II), a crucial offence criterion (*āpatti-aṅga*). According to the Vinaya definition:

‘Proper time (*kāla*) means: **from dawn-rise** (*aruṇuggamanato*) till noon.’ | ‘*Kālo nāma: aruṇuggamanato yāva majjhantikā.*’ (Vvṭ 1.478)

‘Improper time means: when noon has passed **till dawnrise** (*aruṇuggamana*).’ | ‘*Vikālo nāma: majjhantike vītivatte yāva aruṇuggamanā.*’ (Vin iv.86)

Fig. 31 Dawnrise and Proper / Improper Time



Improper Time for Eating (*vikāla-bhojana*)

To eat in the *afternoon* and at *night* is to eat in the ‘improper time’ (*vikāla*) which is an offence of expiation, *Pācittiya* No.37:

‘Whatever monk eats stable or non-stable food at the **improper time** (*vikāla*), there is an **offence of expiation** (*pācittiya*).’ | ‘*Yo pana bhikkhu vikāle khadaniyaṃ vā bhojaniyaṃ vā khādeyya vā bhuñjeyya vā pācittiyaṃ.*’ (Vin iv.86)

According to the above Vinaya definition, ‘improper time’ (*vikāla*) for eating includes night, as ‘improper time’ runs from noon till dawnrise:

‘Improper time means: when noon has passed till dawnrise (<i>aruṇuggamana</i>).’	‘ <i>Vikālo nāma: majjhantike vītivatte yāva aruṇuggamanā.</i> ’ (ibid.)
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Moreover, even before laying down the rule, The Buddha explicitly described night (*ratti*) as ‘the improper time for eating’ (*vikālabhojana*):

‘Come, monks, give up eating at night, at the improper time.’	‘ <i>Ṭiṅha tumhe, bhikkhave, etaṃ rattiṃ vikālabhojanaṃ pajahatha.</i> ’ (M i.448)
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‘One should not eat at night, at the improper time for eating.’	‘ <i>Rattiṃ na bhuñjeyya vikālabhojanaṃ.</i> ’ (Sn v.400)
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An example of how monks adhere to The Buddha’s ruling about eating is found in the Vinaya, in the account of when a group of seventeen newly ordained monks want to eat at night (*rattiyā*), at the time ‘towards dawnrise’ (*paccūsasamayam*). Since they are demanding food at night (*ratti*), at the ‘improper time’ (*vikāla*), they are by their elders told to wait ‘till the night becomes light’ (*yāva ratti vibhāyati*):

‘The group of seventeen [monks] got up at night (<i>rattiyā</i>), at the time towards dawnrise (<i>paccūsasamayam</i>), and cried out: “Give us rice-gruel, give us rice” [Elder] monks spoke thus: “Wait, friends, till the night becomes light (<i>yāva ratti vibhāyati</i>). If there is rice-gruel, you can drink; if there is rice, you can eat If ... not ... then having gone for alms you can eat.” ’	‘ <i>Sattarasavaggiyā ... rattiyā paccūsasamayam paccuṭṭhāya rodanti: “Yāguṃ detha, bhattaṃ detha” Bhikkhū evaṃ āhaṃsu: “Āgametha, āvuso, yāva ratti vibhāyati. Sace yāgu bhavissati, pivissatha; sace bhattaṃ bhavissati, bhuñjissatha ... No ca bhavissati ... piṇḍāya caritvā bhuñjissathā”ti.</i> ’ (Vin iv.129)
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It is still dark ‘towards dawnrise’ (*paccūsa*). Objects are not visible unless one has artificial light, such as a lamp. This can be verified in a passage from the *Jātaka Commentary* concerning a king’s Brahmin chaplain Kevaṭṭa. He woke up ‘towards dawnrise’ (*paccūsa*) and went to see the king’s bed-chamber. To see he had to use a lamp:

‘He woke up at the time towards dawnrise (<i>paccūsakāle</i>), and by the light of a	‘ <i>So paccūsakāle pabujjhivā dīpālokena alaṅkatasirigabbhaṃ olokento mahantaṃ</i>
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lamp (*dīpālokena*) looked at the decorated bed-chamber and **saw** (*disvā*) its great glory’ | *yasam disvā*’ (JA vi.391)

It is because it is still dark ‘towards dawnrise’ (*paccūsa*), it is still night that is, that the seventeen monks’ demands for food are met with the elder monks’ reply: ‘*Wait, friends, till the night becomes light*’. This is further corroboration of the fact that, as discussed above (p.36), ‘dawnrise’ (*aruṇuggamana*), and ‘the night becomes light’ (*ratti vibhāyati*) occur after the lapse of the whole night (*sabba-ratti*), and refer to one and the same phenomenon of light.

Thus, the elder monks’ injunction refers to the ‘improper time for eating’ (*vikālabhojana*), as it, according to the above-mentioned Vinaya definition, lasts till ‘dawnrise’. The elders’ injunction means namely that the newly ordained monks *must wait till dawnrise*, as it is still night (*ratti*), dark that is, and thus still ‘improper time’ (*vikāla*). Once it is no longer dark, the night has become light that is, it is dawnrise and then can they safely eat.⁵⁰

The Buddha too follows this practice. In the *Dīgha-nikāya*, for example, He says about Himself how He does not eat at night, at the improper time:

‘He the recluse Gotama eats at one time a day, abstaining from eating **at night** (*rattī*), refraining from **eating at the improper time** (*vikālabhojanā*).’ | ‘*Ekabhaddiko samaṇo Gotamo, rattūparato, virato vikālabhojanā.*’ (D i.4)

In the *Sutta-nipāta* He refers to Himself and other Buddhas:

‘The Buddhas do not go for alms at the **improper time** (*vikāla*).’ | ‘**Vikāle** na caranti Buddhā.’ (Sn 67)

And in the *Aṅguttara-nikāya* he refers to the Arahants and tells the lay-woman Visākha that a lay disciple should ponder the good qualities of the Arahants and emulate them on the Observance Day (*uposatha*):

‘So long as they live the Arahants eat at one time a day (*eka-bhaddikā*), abstaining from eating **at night** (*rattī*), refraining from eating at the **improper time** (*vikāla*). So also do I abide this night and day | ‘*Yāvajīvaṃ Arahanto ekabhaddikā rattūparatā, viratā vikālabhojanā. Ahampajja imaṅca rattim imaṅca divasaṃ ekabhaddiko rattūparato virato vikālabhojanā. Imināpi aṅgena Arahataṃ anukaromi,*

⁵⁰ The term ‘the night becomes light’ (*ratti vibhāyati*) is used also by The Buddha. Please see p.102.

eating at one time, abstaining from eating at night, refraining from eating at the improper time. In this respect too I emulate the Arahants and shall have kept the Observance Day.’

| *uposatho ca me upavuttho bhavissati.*
(A i.212)

Proper Time for Eating (*kālabhojana*)

Eating when Dawnrise Occurs

Since at dawnrise the whole night has passed, the night has become light, natural daylight has diffused to the surroundings, and day has begun, monks are, according to the Vinaya standards, allowed to eat after this time until noon. This period is called proper time (*kāla*). As the *Vinayavinicchaya Subcommentary* above (p.84) explained:

‘Proper time (*kāla*) means: **from dawnrise** (*aruṇuggamanato*) till noon.’

| *‘Kālo nāma: aruṇuggamanato yāva maj-jhantikā.’*
(Vvṭ 1.478)

Other *Subcommentaries* explain besides:

‘**From dawnrise** (*aruṇuggamanato*) till noon is the **customary time** (*āciṇṇasamāciṇṇakāla*) for Noble Ones such as Buddhas to eat.’

| *‘Aruṇuggamanato paṭṭhāya yāva maj-jhānikā ayaṃ Buddhādīnaṃ ariyānaṃ āciṇṇasamāciṇṇo bhojanassa kālo nāma. Tadañño vikālo.’*
(Dṭ 1.123; Mṭ 2.158; Sṭ 2.547; Aṭ 2.177)

Moreover, when the *Samantapasādikā* (Vinaya) *Commentary* discusses the Canonical account of how The Buddha after His Enlightenment received His first meal, offered to Him by two merchants, and how He partook of it, it explains that He did so when dawn had arisen (*uggate aruṇamhi*):

‘**When dawn had arisen** (*uggate aruṇamhi*) ... The Exalted One received the rice-cake and honey-balls in a new bowl made of rock crystal, and having received them he partook of them (*paribhuñji*).’

| *‘Uggate aruṇamhi ... paṭiggahesi Bhagavā paccagge selamaye patte manthāṅca madhupiṇḍikaṅca. Paṭiggahetvā ca paribhuñji.’*
(VA v.959f; Vin i.4)

The proper time (*kāla*) for receiving and consuming food begins after the lapse of night (*rattiyā accayena*). Thus, it is also the time (*kāla*) for patrons to announce to the order of monks, that the day’s meal is ready to be offered. For example, once when

The Buddha and five hundred monks had on the previous day been invited by a Brahmin for the day’s meal:

‘Then the Brahmin of Verañja, prepared sumptuous staple and non-staple food at his home, and **after the lapse of night** (*rattiyā accayena*), had the time announced to the Exalted One, saying: “**It is time** (*kālo*), good Gotama, the meal is ready.”⁵¹ Then the Exalted One dressed Himself in the earlier period of that day (*pubbañhasamayam*), took His bowl and robe, and went to the house of the Brahmin of Verañja, together with the order of [five hundred] monks. Then, when the Exalted One had eaten ... the Brahmin of Verañja ... offered him a set of three robes.’

‘*Atha kho Verañjo Brāhmaṇo tassā rattiyā accayena sake nivesane pañītaṃ khādaniyaṃ, bhojanīyaṃ paṭiyādāpetvā Bhagavato kālaṃ ārocesi: “Kālo, bho Gotama, niṭṭhitaṃ bhattaṃ”ti. Atha kho Bhagavā pubbañhasamayam nivāsetvā patta-cīvaramādāya yena Verañjassa Brāhmanassa nivesanaṃ ... upasaṅkamitvā ... saddhiṃ bhikkhusaṅghena [pañcamattehi bhikkhūsatehi]. Atha kho Verañja Brāhmano ... Bhagavantaṃ bhuttāviṃ ... ticīvarena acchādesi.*’ (Vin iii.11)

Eating when the Night Becomes Light

As discussed above, it is after the lapse of night that dawnrise occurs and the night becomes light, in which case it is allowed for monks to eat. The Buddha Himself follows this practice, and both the *Samyutta-nikāya*- and *Sutta-nipāta Commentaries* mention, for example, how He partakes of His meal when the night becomes light (*vibhātāya rattiyā*). This is in connection with the Canonical account of when The Buddha helped the ogre Ālavaka Yakkha, as well as his prospective breakfast the young Prince Ālavaka, attain supramundane states:

‘The Exalted One got up **at the time towards dawnrise** (*paccūsasamaye*) ... and

‘*Bhagavā paccūsasamaye paccuṭṭhāya ... Buddhacakkhunā lokaṃ volokento adda-*

⁵¹ The syntax of this clause agrees with the Commentarial exegesis:

‘He [firstly] prepared the sumptuous food offering ... and after the lapse of night ... had the time announced to the Exalted One.’

‘*Pañītaṃ dānaṃ paṭiyādāpetvā ... tassā rattiyā accayena ... Bhagavato kālaṃ ārocesi.*’ (VA.200)

To have prepared food for five hundred monks **before**, rather than **after** the lapse of night, would have given him sufficient time to complete the task. That way, he would have been able to offer it in the earlier period of the day (*pubbañhasamayam*).

while surveying the world with His Buddha-eye, saw the qualification of the young Prince Ālavaka for the attainment of the fruition of non-returner, and the ogre for the attainment of the fruition of stream-entry Therefore, **when the night became light** (*vibhātāya rattiyā*) **He partook of His morning meal** (*purebhattakiccaṃ katvā*)⁵², and ... entered the mansion of the ogre.’

sa Ālavakassa kumārassa anāgāmphaluppattiyā upanissayaṃ, yakkhassa ca sotāpattīphaluppattiyā upanissayaṃ Tasmā vibhātāya rattiyā purebhattakiccaṃ katvā ... tassa yakkhassa bhavanaṃ pāvisi.’
(SA i.319; SnA i.220)

‘Morning’ (*purebhatta*), used in the above phrase ‘morning meal’ (*purebhattakiccaṃ*), is defined in the *Vinaya Piṭaka*:

‘Morning (*purebhatta*) means: from dawnrise (*aruṇuggaṃ*) till noon.’

‘*Purebhattaṃ nāma: aruṇuggaṃ upādāya yāva majjhantikā.’*
(Vin iv.272)

Thus, in both Commentarial passages *when the night became light He partook of His morning meal* means: *when dawn arose He partook of His morning meal*.

Lay-followers (*upāsakas*), being familiar with the rules and practices of monks, would prepare food and serve the Order of monks when the night became light (*vibhātāya rattiyā*). This is seen in, for example, a passage in the *Peta-vatthu Commentary* concerning some people in Rājagaha who became terrified by the loud and frightening cries of ghosts at night (*rattiyā bherava mahāsadda*). The passage says what they did to relieve their distress:

‘The people heard the [cries] and became terrified. **When the night became light** (*vibhātāya rattiyā*), they [the people] prepared a great offering of food for the Order of monks headed by The Buddha; invited The Buddha and the Order of monks; served them with sumptuous staple and non-staple food; and when The Buddha had eaten and removed His hand from His bowl they related the incident. The Exalted One told them: “Lay-follow-

Manussā taṃ sutvā bhūtatasiṭā vibhātāya rattiyā Buddhappamukhassa bhikkhusaṅghassa mahādānaṃ sajjtvā, Sathāraṃ bhikkhusaṅghaṃ nimanttvā, paṇītena khādanīyena bhojanīyena parivisitvā Bhagavantaṃ bhuttāviṃ onītapattapāṇiṃ upanīditvā taṃ pavattiṃ nivedesuṃ. Bhagavā “Upāsakā, tena vo saddena koci antarāyo natthi, ...” avoca.’
(PvA 278)

⁵² Instead of *pure-bhatta*, the above *Samyutta-nikāya Commentary* employs the synonym *purima-bhatta*. Both *pure* and *purima* mean ‘early’. Thus, the literal meaning of *pure-bhatta* and *purima-bhatta* is ‘early meal’.

ers (*upāsakā*), you are not in danger because of those cries” ’

Serving and eating food when the night becomes light (*vibhātāya rattiya*) was not a practice exclusive to The Buddha and His Order of monks. In the *Dīgha-nikāya Commentary* it can be seen that in ancient India the practice was observed also by kings and their Brahmin chaplains. A passage in the *Dīgha-nikāya Commentary*'s account of the events that preceded the birth of Prince Siddhatha shows how His father, King Suddhodana, when the night became light, invited sixty Brahmin priests to partake of milk-rice. Afterwards he asked them to divine the meaning of his queen's dream about a white elephant circling her and entering her side:

‘Then the Queen woke up and related the dream to the king. **When the night became light** (*vibhātāya rattiya*) the king invited sixty Brahmin high priests ... and offered them sumptuous milk-rice prepared with ghee, honey, and sugar. He then related the dream to them and asked what was going to happen.’

‘*Atha pabuddhā devī taṃ supinaṃ rañño ārocesi. Rājā vibhātāya rattiya catusaṭṭhimatte brāhmaṇapāmokkhe pakkosāpetvā ... sappimadhusakkarābhisankhatassa varapāyāsassa ... adāsi. Atha nesaṃ ...taṃ supinaṃ ārocetvā “kiṃ bhavissati”ti pucchi.*’
(DA ii.431)

In the above account of King Nimi's almshouses too (p.61), it was seen how people would, from dawnrise onwards, enter the almshouses naturally (*pakātiya*), and eat by natural daylight, needing no lamps etc., because there was natural visibility.

Eating after Dawnrise

The conclusions and observations in this chapter can be further verified by examining the natural visibility of dawnrise from a quite other perspective: what happens immediately after dawnrise. For should dawnrise occur while it is still dark, then by proxy the period immediately after dawnrise has to be while it is still dark. The discussion presented is an attempt to show that the period immediately after dawnrise too cannot be during darkness.

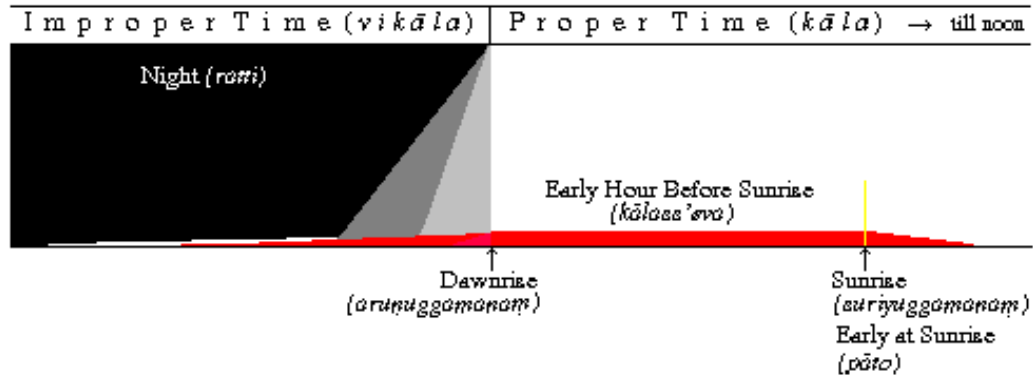
Eating at ‘Early Hour Before Sunrise’ (*kālass’eva*) and ‘Early at Sunrise’ (*pāto*)

The proper time for eating (*kālabhojana*) has been seen to begin at dawnrise — i.e. when the night has become light — and has been seen to be the time for monks to receive and eat food, according to their monastic rule and according to custom. Further such customs obtain, say the Pāli Texts, immediately after dawnrise, in the time be-

tween dawnrise and sunrise during which there is natural visibility, and at sunrise itself, i.e. in Pāli:

- *Kālass'eva* (early hour before sunrise), and
- *Pāto* (early at sunrise).

Fig. 32 Early Hour Before Sunrise (*kālass'eva*) and Early at Sunrise (*pāto*)



Eating at *Kālass'eva* (Early Hour Before Sunrise)

Kālass'eva (early hour before sunrise) is by The Buddha advised as the time at which, for example, rice-gruel should first be offered, received and eaten:

<p>‘Monks, the preceptor’s pupil ... should carry out his duties towards his preceptor properly He [the pupil] should rise at early hour before sunrise (<i>kālass'eva utthāya</i>) ... he should give him [the preceptor] water for rinsing his mouth ... and offer him rice-gruel (<i>yāgu</i>). After he [the preceptor] has had the rice-gruel ... he [the pupil] should wash the vessel’⁵³</p>	<p>‘<i>Saddhivihārikena, bhikkhave, ... upajjhāyamhi sammā vattitabbaṃ ... Kālass'eva utthāya ... mukhodakaṃ dāttabbaṃ ...yāgu upanāmetabbā. Yāguṃ pītassa ... bhājanāṃ ... dhovivā’ (Vin i.46)</i></p>
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⁵³ If the pupil is sick the preceptor (*upajjhāya*) should carry out the same duties towards him; the same reciprocal duties apply in the case of a teacher (*ācariya*) and his pupil. (cf. Vin i.61)

Time of *Kālass'eva*

The time of *kālass'eva* (early hour before sunrise) can be estimated by referring to the Pāli Texts. They show that it occurs

- after dawnrise (*aruṇuggamana*),
- after the synonymous 'the night has become light' (*vibhātāya rattiyā*), but
- before sunrise (*suriyuggamana*).

Kālass'eva Occurs after Dawnrise

A passage which indicates that *kālass'eva* (early hour before sunrise) occurs after dawnrise (*aruṇuggamana*), and also that people eat at this time, is found in the *Jātaka Commentary*, and concerns The Bodhisatta Gotama in a past life as the leader of a caravan. It describes how caravan leaders such as he travel through the desert, and when they would eat:

'From sunrise onwards, the fine sand in the desert ... becomes hot like a heap of burning coal. One cannot walk on it. Therefore, they who enter [the desert] ... travel by night. **At dawnrise** (*aruṇuggamane*) they arrange the carts in a circle, put up a tent, finish eating **at early hour before sunrise** (*kālass'eva*), spend the day in the shade, have their supper at sunset, and when the ground has cooled down, they yoke the carts and travel. It is travelling as if at sea. It is necessary to get a so called 'land navigator'. He guides the caravan over by looking at the stars.'⁵⁴

'*Tasmīṃ kantāre sukhumavālukā ... sūriyuggamanato paṭṭhāya aṅgararāsi viya uṇhā hoti. Na sakkā akkamituṃ. Tasmā taṃ paṭipajjantā ... rattimeva gantvā, aruṇuggamane sakaṭāni parivaṭṭaṃ katvā, matthake maṇḍapaṃ kāretvā, kālass'eva āhā-rakiccaṃ niṭṭhāpetvā, chāyāya nisinnā divasaṃ khepetvā, atthaṅgate sūriye sāyamāsaṃ bhūñjitvā, bhūmiyā sītalāya jātāya sakaṭāni yojevā gacchanti. Samuddagamanasadisameva gamanaṃ hoti. Thalaniyā-mako nāma laddhuṃ vaṭṭati. So tārakasaññā satthaṃ tāreti.'* (JA i.107)

Kālass'eva Occurs after the Night Has Become Light

A passage which indicates that *kālass'eva* (early hour before sunrise) occurs after the night has become light (*vibhātāya rattiyā*), and also that Arahants eat at this time,

⁵⁴ There are three main reasons why they can travel in the darkness of night: a) There are no obstacles in the desert as elsewhere. b) The oxen can see in the dark. [ref. p.41, footnotes 19, 20]. c) The navigator can orient himself according to the stars. Thus is it travelling as if at sea.

is found in the *Vimāna-vatthu Commentary* and concerns three Arahants who, on their way to meet The Buddha, spent the night near a sugar-cane field:

‘On their way, three elder monks who were Arahants ... went in the evening near a sugar-cane field and stayed there. Then, **when the night had become light** (*vibhātāya rattiyā*), **at early hour before sunrise** (*kālass’eva*) the watchman of the sugar-cane field cooked rice, gave them toothsticks and water for rinsing the mouth, and offered them rice with sugar-cane juice. When they had eaten ... he offered each Arahant some sugar cane.’

‘*Tayo khīṇāsavattherā ... antarāmagge sāyam ... ucchukhettsamīpaṃ gantvā ... tatha vasiṃsu. Atha [ucchupālo] vibhātāya rattiyā, kālass’eva bhattaṃ pacitvā, dantakaṭṭhañca mukhodakañca datvā, saha ucchurasena bhattaṃ adāsi. Tesaṃ bhuñjītvā ... ekekaṃ ucchuṃ adāsi.*’ (VA 255)

Kālass’eva Occurs before Sunrise

A passage which indicates that *kālass’eva* (early hour before sunrise) occurs before sunrise (*suriyuggamana*) is found in *Aṅguttara-nikāya*, and concerns the manner in which Brahmins incite their disciples to perform certain rites before sunrise:

‘... the Brahmins ... incite their disciples thus: “Come now, good man. **Rise at early hour before sunrise** (*kālass’eva vuṭṭhahanto’va*) and touch the ground from your bed. If you do not touch the ground from your bed, then touch fresh cow dung ... worship the fire. If you do not worship the fire, then worship the sun (*ādiccaṃ namaseyyāsi*) with joined palms.”’

‘... *brāhmaṇā ... sāvakaṃ evaṃ samādapenti: “Ehi tvam, ambho purisa. Kālass- eva vuṭṭhāhanto’va sayanamhā paṭhaviṃ āmaseyyāsi. No ce paṭhaviṃ āmaseyyāsi, allāni gomayāni āmaseyyāsi ... aggiṃ paricareyyāsi, pañjaliko ādiccaṃ namaseyyāsi.”*’

(A v.263)

Here *ādicca* (lit. the Blazing One, i.e. the sun) is explained in the *Cullanidesa* as a *synonym* for *suriya* (the sun):

‘**Suriya** (the sun) is called *ādicca*.’

‘*Ādicco vuccati suriyo.*’

(Nd2 125)

Thus, *ādiccaṃ namaseyyāsi* (worship the sun) is the same as: *suriyaṃ namaseyyāsi*, and to this day, Brahmins know that: ‘*suriya namaskar* [sun-worship] should always be done in the morning at sunrise.’⁵⁵

The rite of worshipping the sun in the morning *at sunrise* is also referred to in a *Jātaka* story, where a female ascetic, on her way to the village for alms, sees a man worshipping the sun:

‘It was early at sunrise (<i>pāto</i> ’ <i>va</i>) ... that he stood worshipping the sun (<i>suriyaṃ namassanto</i>).’	‘So ... <i>pāto</i> ’ <i>va</i> ... <i>suriyaṃ namassanto aṭṭhāsi</i> .’ (JA v.428)
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‘Early at sunrise’ (*pāto*)⁵⁶ is explained in the *Aṅguttara-nikāya Commentary*:

‘ Early at sunrise (<i>pāto</i>) means: early (<i>pageva</i>) ⁵⁷ , at the time of sunrise (<i>suriyuggamana-kāle</i>).’	‘ Pāto ’ <i>ti</i> : <i>pageva, suriyuggamanakāle</i> .’ (AA iii.315)
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In this way, *kālass’eva* (early hour before sunrise) occurs after dawnrise and earlier than sunrise (*suriyuggamana*). It is, however, necessary to gain some idea of how much earlier than sunrise this is. A way to do so is to examine the features of the physical world, as they at this time appear to Man, i.e. whether there is natural visibility at *kālass’eva* (early hour before sunrise).

Visibility at *Kālass’eva*

A passage in the Canon reveals that there is natural visibility at *kālass’eva* (early hour before sunrise). It is a parable given by the Arahant Kumāra Kassapa about a fire-worshipping, matted-hair ascetic (*aggika-jaṭila*)⁵⁸:

‘Then that caravan spent one night near the ascetic’s hermitage and left. The ascetic then rose at early hour before sunrise (<i>kālass’eva vuṭṭhāya</i>), went to the site where the caravan had been camped, and there he saw (<i>addasa</i>) an abandoned	‘ <i>Atha kho so sattho tassa ... jaṭilassa assamassa sāmantaṃ ekarattiṃ vasitvā pakkāmi. Atha kho so jaṭilo kālass’eva vuṭṭhāya yena so satthavāso tenupasaṅkami. Upasaṅkamitvā addasa tasmim̐ satthavāse ... daharaṃ kumāraṃ mandaṃ uttāna-</i>
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⁵⁵ *Concept of Ayurveda*, p.80.

⁵⁶ Ref. P.E.D: ‘**Pātar** (adv.) [Vedic *prātar*, der. fr. **pro*, **prā* ... early ...] early in the morning ... **pāto**.’

⁵⁷ ‘*Pā + eva*’ (Kac rule 24); the prefix *pā* or in Sanskrit *prā* in the sense of *paṭhamaṃ* (at first, early).

Thus: ‘*Pagevā*’*ti* = *paṭhamaṃ yeva*.’ (AA iii.310, v.26)

⁵⁸ A such fire-worshipping ascetic does not, as might be assumed, carry the fire with him. The sacred fire he worships is kept burning at a for that purpose chosen place in his hermitage.

little baby boy lying on his back. Seeing [the boy] he thought: “It is not proper that a human being should die before mine very eyes.” Then ... he carried the baby boy to his hermitage ... [and] fed it.’

seyyakaṃ chadditaṃ. Disvāna etadahosi: “Na kho me taṃ patirūpaṃ yaṃ me pekhamānassa manussabhūto kālaṃ kāreyyā”ti. Atha kho ... taṃ dāraṃ assamaṃ ānetvā ... posesi.’ (D iii. 339)

Having in this way established that there is natural visibility at *kālass’eva* (early hour before sunrise), and that *kālass’eva* occurs after dawnrise and before sunrise, it is necessary now to examine any textual descriptions of how it figures in a monk’s daily routine.

Getting Ready and Going for Alms by Natural Light at *Kālass’eva*

In terms of a monk’s daily routine, *kālass’eva* (early hour before sunrise) is by The Buddha advised as the time at which, as seen above (p.91), rice-gruel should first be offered, received and consumed. Furthermore, *kālass’eva* is by The Buddha advised as the time for a forest monk to get ready, and set out for his almsround (*piṇḍapāta*):

‘Monks, a forest monk should **rise at early hour before sunrise** (*kālass’eva utthāya*), put his bowl into its bag, hang it over his [left] shoulder, put his [double] robe over his [left] shoulder, put on his sandals, set in order any articles of wood [or] earthenware, shut the door and windows, and step out from his lodging, thinking: “I shall now enter the village”... he should enter the village properly and not hurriedly.’

‘Āraññikena, bhikkhave, bhikkhunā kālass’eva utthāya, pattaṃ thavikāya pakkipitvā, aṃse ālaggetvā cīvaraṃ khandhe karitvā, upāhanā ārohitvā, dārubhaṇḍaṃ, mattikabhaṇḍaṃ paṭisāmetvā, dvāravātapānaṃ thaketvā senāsanā otaritabbaṃ: “Idāni gāmaṃ pavissāmi”ti ...sādhukaṃ ataramānena gāmo pavisitabbo.’ (Vin ii.217)

In summary, *kālass’eva* (early hour before sunrise) occurs between dawnrise and sunrise, at which time objects are naturally visible: the fire-worshipping ascetic could see the little baby boy. It is the time when rice-gruel is offered, received and consumed, and when a forest monk prepares to leave for his almsround.

Since this custom for receiving food and eating at the proper time has now been explained, the next custom to be discussed is the time of *pāto* (early at sunrise).

Receiving Food and Eating at *Pāto* (Early at Sunrise)

The term used for eating at *pāto* (early at sunrise) is *pāta-rāsa* (breakfast, lit. morn-ing meal). It is defined in the *Āṅguttara-nikāya Subcommentary*:

‘The meal to be eaten at *pāto* (early at sunrise) is called *pātarāsa* (breakfast).’ | ‘*Pāto asitabba-bhojanaṃ pātarāsaṃ.*’ (Aṭ ii.166)

Time of *Pāto* (Early at Sunrise)

The time of *pāto* (early at sunrise) and its synonymity with *suriyuggamana* (sunrise) was given above (p.94) by the *Āṅguttara-nikāya Commentary*. To repeat:

‘***Pāto*** (early at sunrise) means: early (*pa-geva*), at the time of sunrise (*suriyuggamana-kāle*).’ | ‘***Pāto***’ti: *pageva, suriyuggamanakāle.*’ (AA iii.315)

This time and synonymity can best be seen in, for example, the aforementioned Commentarial account of when the ascetic Nārada came into conflict with another ascetic who laid a curse upon Nārada, declaring that at sunrise Nārada’s head would split into seven pieces.⁵⁹

<p>‘May the thousand-rayed And hundred-flamed Sun that dispels the darkness, Your head into seven pieces split, Early (<i>pāto</i>) when it rises.’</p>	<p>‘<i>Sahassaraṃsī, satatejo, Suriya-tamavinodano Pātodayante suriye, Muddhā te phalatu sattadhā.</i>’ (DhA i.41f)</p>
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Having in this way established that *pāto* (early at sunrise) occurs at sunrise (*suriyuggamana*) and is synonymous with sunrise, it is necessary now to examine any textual descriptions of how it figures in a monk’s daily routine.

Entering the Village, Going for Alms and Having Breakfast at *Pāto* (Early at Sunrise)

The full natural visibility at sunrise may be presumed to be beyond question. Suffice it therefore to say that The Buddha advised monks to get ready and set out for their almsround (*piṇḍapāta*) at *kālass’eva* (early hour before sunrise), when natural visibility already prevails, and to enter the village at *pāto* (early at sunrise), which is at the proper time (*kāla*), in order to get their *pātarāsa* (breakfast):

‘Let the monk go to the village for alms (*piṇḍāya*) at the proper time (*kāle*) ...’ | ‘*Bhikkhu gāme ca piṇḍāya careyya kāle, ... kālena so pavise pātarāsaṃ.*’ (Sn 68)

⁵⁹ Please see p.57.

Let him enter [the village] at the proper time for his breakfast (*pātarāsa*).' |

Pātarāsa (breakfast) is defined in the *Sutta-nipāta Commentary* thus:

‘That which is to be eaten at *pāto* (early at sunrise) is called *pātarāsa*. This is a designation for alms (*piṇḍapāta*).’⁶⁰ | ‘*Pāto asitabbo’ti pātarāso. Piṇḍapātassetaṃ nāmaṃ.*’ (SnA i.373)

A passage which confirms that recluses and ascetics as a custom would go for alms ‘early at sunrise’ (*pāto*) is found in the *Jātaka Commentary’s* account of when the Bodhisatta Gotama, as a peacock, was caught in a hunter’s snare. When the hunter asked Him about the holy life, the peacock told him to ask recluses, and described them:

‘Whatever recluses there are on earth,
With saffron robes and being homeless,
They go for alms early at sunrise (*pāto’va*)
At the proper time (*kāle*);
For good men abstain from going
At the improper time (*vikāla*).’ |

‘*Ye keci atthi samaṇā pathabyā,
Kāsāyavatthā anagāriyā te,
Pātova piṇḍāya caranti kāle;
Vikālacariyā viratā hi santo.*’
(J iv. 340)

The *Majjhima-nikāya Commentary* tells of the Venerable Kāḷadeva, famed for his acute perception of time, who entered the village and received alms ‘early at sunrise exactly’ (*pāto yeva*):

‘It was early at sunrise exactly (*pāto eva*) that the elder entered the village [and] received alms’ | ‘*Thero pāto yeva gāmaṃ pavisitvā piṇḍapātaṃ ādāya*’ (MA i.122)

Concluding Remarks

In an attempt to determine how ‘dawnrise’ (*aruṇuggamana*) and ‘the night becomes light’ (*ratti vibhāyati*) figure in terms of a monk’s daily routine, the preceding pages

⁶⁰ *Pātarāsa* is a designation for alms (*piṇḍapāta*) in the context of a monk’s life. But for laymen, *pātarāsa* refers to their breakfast: ‘The king ... had his breakfast (*pātarāsa*), and then sat in the law court.’ (*Rājā ... pātarāsaṃ bhuñjītvā vinicchayaṭṭhāne nisīdi.*) (SnA i.60)

have seen the discussion of a number of Pāli terms, from a wide range of sources, Canonical and Post-canonical. Since these terms form the main divisions of night and day within which a monk regulates his daily life, it would therefore, at this point, be useful to try to evaluate those terms as a whole. The next Chapter will, thus, see the discussion of the divisions of night and day with an overview of those Pāli terms.

Chapter VI

Dawnrise and the Divisions of Night and Day

Light and darkness have always served as the basic distinction by which Man has oriented himself in time: the time of light is day, and the time of darkness is night. In the *Aggañña-sutta* (*Dīgha-nikāya*), where The Buddha describes the evolution of the universe, He explains when nights and days were distinguished:

‘In that period ... there was just one mass of water, and all was darkness, blinding darkness When the moon and sun appeared ... nights and days were distinguished ... and months, half-months ... seasons and years.’

‘*Ekodakībhūtaṃ ... tena samayena hoti andhakāro, andhakāratimisā Candīmasūriyesu pātubhūtesu ... rattindivā paññāyīṃsu ... māsaḍḍhamāsā ... utu-saṃvaccharā paññāyīṃsu.*’ (D iii.85)

In the *Saṃyutta-nikāya* He gives further details:

‘Monks, when the moon and sun arise in the world, the appearance of a great light comes into being, a great luminosity. At that time there is no darkness. ... Then are nights and days distinguished, and months, half-months ... seasons and years.’

‘*Yato ca kho, bhikkhave, candima-suriyā loke uppajjanti, atha mahato ālokassa pātubhāvo hoti, mahato obhāsassa. Na andhakāratamaṃ tadā hoti ... Atha rattindivā paññāyanti, māsaḍḍhamāsā ... utusaṃvaccharā paññāyanti.*’ (S v.443)

The *Dīgha-nikāya Commentary*’s analysis of the *Aggañña-sutta*, explains ‘nights and days’ (*rattindivā*):

‘**Nights and days** means: from sunset till **dawnrise** (*yāva aruṇuggamanā*) the night, and from **dawnrise** (*aruṇuggamanato*) till sunset the day, thus were nights and days distinguished.’

‘**Rattindivā**’ti: *tato suriyatthaṅgamanato yāva aruṇuggamanā ratti, aruṇuggamanato yāva suriyatthaṅgamanā divā’ti, evaṃ rattindivā paññāyīṃsu.*’ (DA iii.868)

In this way, the feature of night is darkness, and the feature of day is light. The source of that light is the sun. Hence, the feature of sun in Man’s surroundings is also light. This is how the distinction between nights and days came to be.

As for the feature of dawnrise (*aruṇuggamana*), it is, as mentioned above ⁶¹, the distinctive radiance of the sun, which at this time diffuses in all four quarters (*catu-disā*).

⁶¹ Please see pp.2, 27.

It is in the *Samyutta-nikāya* described by The Buddha as ‘the forerunner and advance sign’ of sunrise:

<p>‘Monks, this is the forerunner (<i>pubbaṅga-</i> <i>ma</i>), this is the advance sign (<i>pubbanimit-</i> <i>ta</i>) of sunrise, namely dawnrise (<i>aruṇug-</i> <i>gaṃ</i>).’</p>	<p>‘<i>Suriyassa, bhikkhave, udayato etaṃ pub-</i> <i>baṅgamaṃ, etaṃ pubbanimittam, yadidaṃ</i> <i>aruṇuggaṃ.</i>’ (S v.442)</p>
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Accordingly, if the feature of sun in Man’s surroundings is light, the feature of dawnrise (*aruṇuggamana*), which is ‘the forerunner and advance sign’ of sunrise, cannot be darkness, but light. In Man’s surroundings, therefore, i) from sunset to **dawnrise (light)** is night, and ii) from **dawnrise (light)** till sunset is day. This is how the distinction between night (darkness) and day (light) can be understood.

It becomes thus clear that the dividing-line between night and day is dawnrise. It was said also in the *Jātaka Commentary* above ⁶²:

<p>‘At the expiration of night (<i>jighaṇṇarat-</i> <i>tiṃ</i>) ... at the end of night (<i>pacchimarar-</i> <i>atiṃ</i>), at the termination of night (<i>ratti-</i> <i>pariyosāne</i>), dawn arises (<i>aruṇe ugga-</i> <i>te</i>).’</p>	<p>‘<i>Jighaṇṇaratiṃ ... pacchimaratiṃ, ratti-</i> <i>pariyosāne, aruṇe uggate.</i>’ (JA v.403)</p>
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And in the *Vimativinodani Subcommentary*:

<p>‘Dawnrise (<i>aruṇuggamana</i>) is the begin- ning of the day.’</p>	<p>‘<i>Aruṇuggamanaṃ divasassa ādibhūtaṃ.</i>’ (Vmt 1.311)</p>
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Thus, the importance of dawnrise as the dividing-line between night and day becomes obvious.

Night and day, however, have for practical reasons, and by a variety of ways, been divided by Man further, with subdivisions such as ‘first watch of the night’ (*paṭhamayāma*), ‘middle watch’ (*majjhimayāma*), ‘last watch’ (*pacchamayāma*) ⁶³; ‘earlier period of the day’ (*pubbaṅhasamayam*), ‘middle period of the day’ (*majjhantikasamayam*), and ‘later period of the day’ (*sāyaṅhasamayam*) ⁶⁴; or ‘morning’ (*purebhattaṃ*), and ‘afternoon’ (*pacchābhattaṃ*) ⁶⁵. With the onset of modern civilization, the divisions have been much elaborated and different modes of measure devised, such as

⁶² Please see p.37.

⁶³ Vin ii.236; A ii.119 etc.

⁶⁴ A i.115 etc.

⁶⁵ Vin iv.272 f.

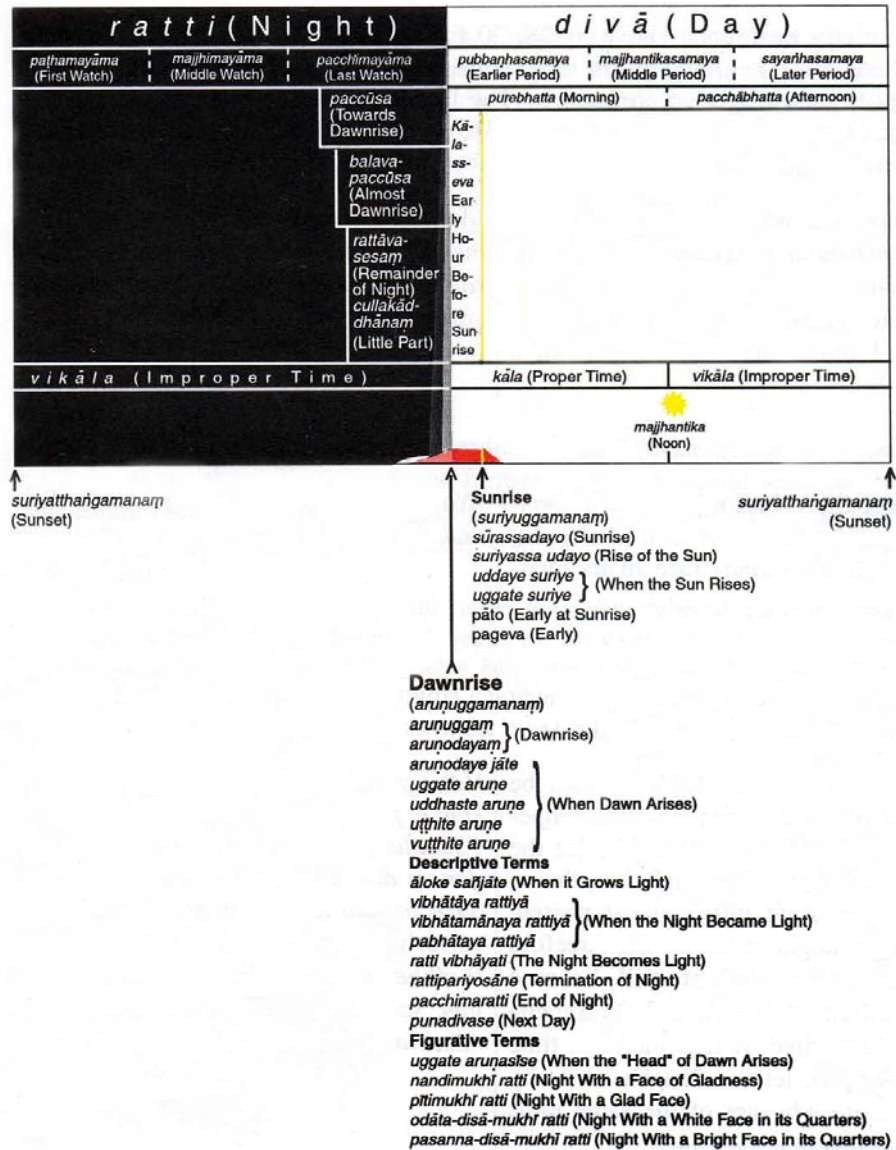
solar day, civil day, and civil twilight. By the use of increasingly sophisticated apparatuses, Man has refined the divisions further to hours, minutes, and seconds, today even fractions of seconds.

Pāḷi terms for the Divisions of Night and Day

As regards the Pāḷi terms employed for the divisions and subdivisions of night and day with **dawnrise** as ‘the dividing-line’, a chart that exhibits all corresponding important Pāḷi terms is given below in order to have an overview of them:

When Is Dawn (*aruṇa*)? When Is Dawnrise (*aruṇuggamana*)?

Fig. 33 Overview of Pāli Terms



Nandimukhī Ratti and Ratti Vibhāyati

It was briefly mentioned above, (p.28, 30 footnotes 8, 11), that two synonymous terms of dawnrise, i.e. *nandimukhī ratti* (night with a joyful face) and *ratti vibhāyati* (the night becomes light), were used by The Buddha Himself. It would be useful at this point to evaluate the context in which He used them. The first term was used by Him when He spent the night in the open air before laying down the robes rule:

‘Then, monks, ... **when the last watch had passed** (*nikkhante pacchime yāme*), **when dawn arose** (*uddhaste aruṇe*), **when the night had a joyful face** (*nandimukhiyā rattiyā*), I felt chilly. I put on, then, a fourth robe.’⁶⁶

‘*Atha kho, bhikkhave, ... nikkhante pacchime yāme, uddhaste aruṇe, nandimukhiyā rattiyā sītaṃ maṃ ahoṣi. Catutthāham cīvaram pārupiṃ.*’ (Vin i.288)

The *Vimativinodanī* (Vinaya) *Subcommentary* explains *nandimukhī ratti*:

‘**When the night had a joyful face** (*nandimukhī ratti*) means: when it [the night] had a bright (*pasanna*) face in its quarters.’

‘*Nandimukhiyā rattiyā*’*ti: pasanna-disā-mukhiyā*’*ti attho.*’ (Vṃṭ ii.198)

The second term, i.e. *ratti vibhāyati*, was used by The Buddha when He advised monks to make sure they finish the Pavāraṇa (Invitation) ceremony on the Pavāraṇa-day, before ‘the night becomes light’ (*ratti vibhāyissati*):

‘Here, monks, ... the Saṅgha should be informed by an experienced and competent monk thus: “Venerable Sir, let the Saṅgha listen to me. The night has, due to people distributing gifts, almost passed. Should the Saṅgha invite by the threefold formula, then **the night will become light** (*ratti vibhāyissati*), and the Saṅgha will not be invited. If it is the right time for the Saṅgha, let the Saṅgha invite by way of those who are of the same rains

‘*Idha pana, bhikkhave, ... vyattena bhikkhunā, paṭibalena saṅgho nāpetabbo: “Suṇātu me, bhante, saṅgho. Manussehi dānaṃ dentehi yebhuyyena ratti khepitā. Sace saṅgho tevācikaṃ pavāressati, apavārito*’*va saṅgho bhavissati. Athāyaṃ ratti vibhāyissati. Yadi saṅghassa pattakal-laṃ, saṅgho devācikaṃ, ekavācikaṃ, samānavassikaṃ pavāreyyā*”’*ti.*’ (Vin i.168)

⁶⁶ The Department of Meteorology, Colombo, Sri Lanka, confirms that this period is the chilliest (*sītaṃ*).

and by the twofold or onefold formula.’ |

According to the Pāli Texts quoted in Chapter III etc., if the night becomes light dawn rises and the next day (*punadivasa*) begins. Thus, should the Saṅgha not finish the Pavāraṇa (Invitation) ceremony on the Pavāraṇa-day itself, and should carry it out after the night becomes light, on the next day, that would mean an *adhammakamma* (a formal act carried out not by rule)⁶⁷. To prevent that, this passage indicates that the Saṅgha should quickly finish the Pavāraṇa-ceremony on the Pavāraṇa-day itself, before ‘the night becomes light’ (*ratti vibhāyissati*), i.e. before dawn rises and the next day (*punadivasa*) begins.

Concluding Remarks

The Pāli Texts that have been discussed in this paper would, as a whole, appear to speak for themselves. That means, no further discussion would seem necessary: the conclusions require no further documentation. The documentation found in those Texts would appear to be more than sufficient; would appear to be coherent, to be solid, and to be authentic.

Nonetheless, the gravity of the issue needs to be remembered: an inaccurate perception of what is meant by ‘dawnrise’, leads to, for example, no small number of offences on a daily basis. Bearing this in mind, it has been considered a good idea to indeed seek further documentation in Scientific Texts.

⁶⁷ ‘*Apavāraṇāya pavāreti, ... adhammakammaṃ*’ (Should he invite on a non-Pavāraṇa-day, ... the formal act carried out is not by rule.) (Vin v.220)

Chapter VII

Dawnrise and Scientific Explanations

The following scientific explanations have been added, so as to explain the general physical laws that govern the atmospheric phenomenon of *dawnrise*; so as to place the empirical observations of Chapters I and III within a present-day scientific framework; and so as to validate locating *dawnrise* within the interval known in meteorology as *morning twilight*. That way, it is hoped, the conclusions drawn from the scrutiny of the Pāli Texts, may be seen to be absolutely and practically applicable in the everyday life of any monk who wishes to observe his Vinaya. The sources of the scientific explanations are encyclopaedias, dictionaries, a navigation handbook and an ephemeris. (Please see the Bibliography for details.)

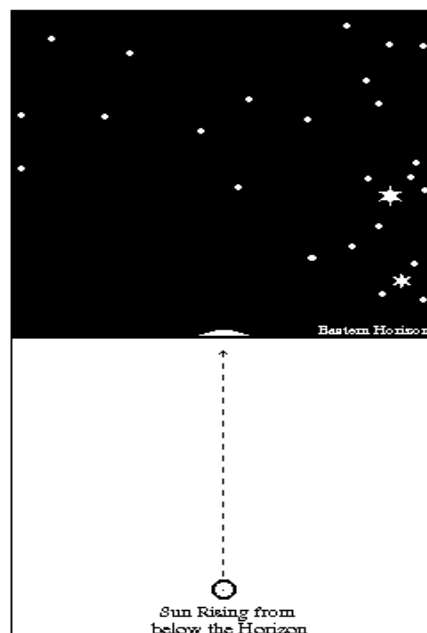
Morning Twilight

‘When the sun arises from below the rational horizon, its light is not suddenly fully obvious to the observer. Although direct sunlight cannot reach the observer, the upper atmosphere will still be sunlit. Reflection and scattering of the sun’s light by the upper atmosphere allows thus some light to reach the observer by indirect means. The amount of this light reaching the observer will increase as the sun’s rising from below the horizon increases. The interval between, when the sun approaches close enough to the eastern horizon to allow light to reach the observer and of sunrise is called *morning twilight*.’

(Navigation Principles and Practices)

[cf. Handmade pictures (Figs.6-11), pp.8-11: the interval between 5.05 a.m. (first white light on the eastern horizon) and 6.20 a.m. (sunrise), i.e. 1hr 15 min. This interval corresponds to the above descriptions of morning twilight.]

Fig. 34 Beginning of Morning Twilight



Three Degrees of Morning Twilight

‘Three degrees of [morning] twilight are conventionally distinguished: astronomical, nautical and civil twilight.’⁶⁸ (McGraw-Hill Dictionary of Scientific and Technical Terms)

1. ASTRONOMICAL TWILIGHT [cf. Handmade picture (Fig.6), p.8: first white light]

‘It begins when the sun is about 18° below the horizon; although this value varies somewhat with the purity of the atmosphere. So, it is impossible to define exactly the moment when all light to an observer appears. Therefore *arbitrarily* morning twilight is considered to begin when the centre of the sun rises to within 18° of the eastern horizon.’ (Navigation Principles and Practices)

‘No light from the sun can then reach the observer. This marks theoretical perfect darkness.’ (McGraw-Hill Encyclopedia of Science and Technology)

‘Even the faintest stars overhead can be seen.’ (The Columbia Encyclopedia)

‘Before this time there is complete absence of sunlight.’ (McGraw-Hill Encyclopedia of Science and Technology)

2. NAUTICAL TWILIGHT [cf. Handmade picture (Fig.10), p.10: the horizon is visible but not sharp]

‘It begins when the centre of the sun rises to within 12° of the eastern horizon.’ (Navigation Principles and Practices)

‘...; at this time both the horizon and the brighter stars are visible.’ (McGraw-Hill Encyclopedia of Science and Technology)

‘The light [however] is too dim for the user of a sextant⁶⁹ to see a sharp horizon.’ (The Columbia Encyclopedia)

3. CIVIL TWILIGHT [cf. Handmade picture (Fig.11), p.11: a sharp horizon is visible]

⁶⁸ These three degrees are also called **astronomical dawn**, **nautical dawn** and **civil dawn**, and are similarly defined as the astronomical twilight, etc. above. (*National Oceanic and Atmospheric Administration. Astronomical Terms*. <http://www.srh.noaa.gov/ffc/html/gloss3.shtml>)

The three degrees of morning twilight exist at evening twilight too, but ‘there is not a great difference between morning and evening twilights’ (*Encyclopaedia Britannica, 1961*), and ‘The dawn colours appear in the reverse order from those of the sunset [evening twilight] ... The colours of dawn are purer and colder than sunset colours as the reduced dust content in the atmosphere causes less sifting of the light rays.’ (*ibid.*) Since it is, however, *dawnrise* that is under consideration, only morning twilight will here be discussed.

⁶⁹ ‘An instrument for measuring angular distances used esp. in navigation to observe altitudes of celestial bodies.’ (*Webster’s New Collegiate Dictionary*) ‘The officer is looking through a small telescope straight at the sea horizon.’ (*Encyclopaedia Britannica, 1967*)

‘It begins when the centre of the sun rises to within 6° of the eastern horizon.’
(Navigation Principles and Practices)

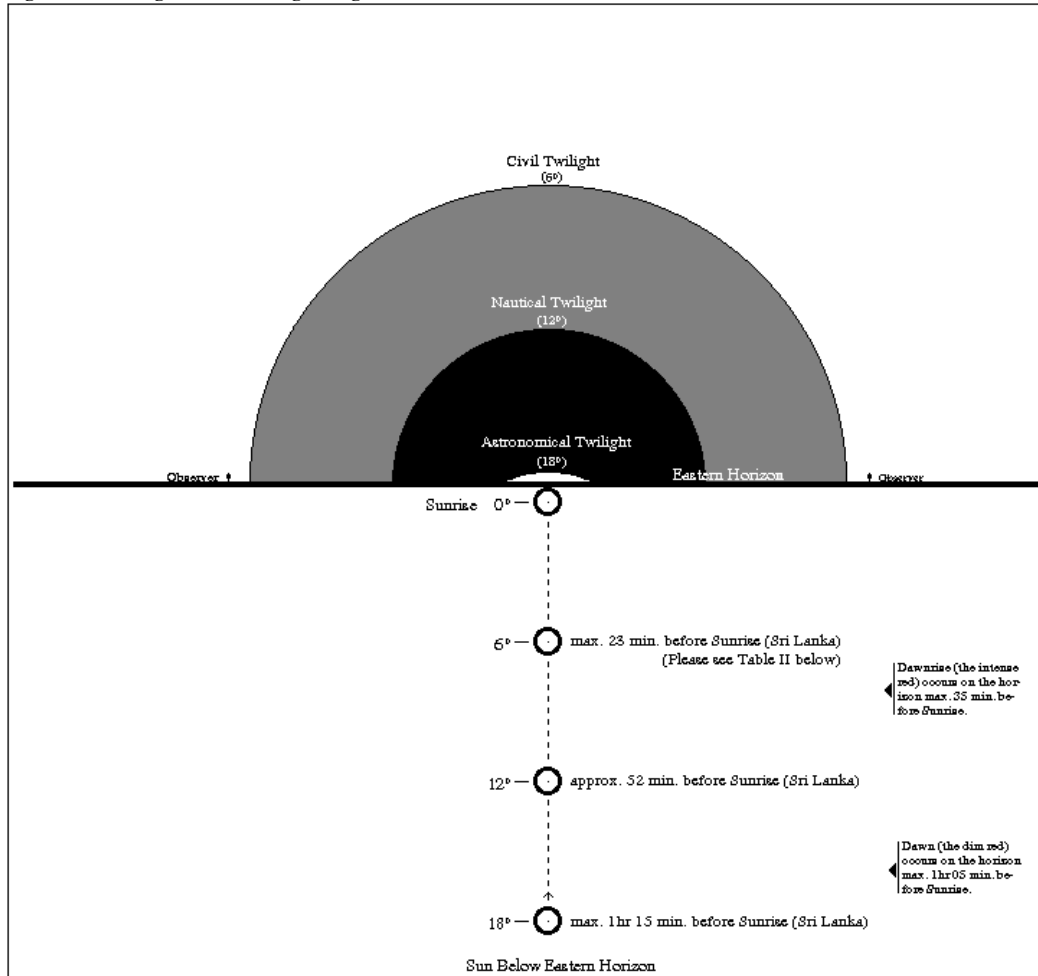
‘... if the sky is clear it is usually practicable to carry on ordinary outdoor occupations without artificial light.’
(McGraw-Hill Encyclopaedia of Science and Technology)

‘... natural illumination is sufficient for conducting ordinary outdoor activities.’
(Encyclopaedia Britannica, 1967)

‘Accordingly, astronomical twilight begins and ends at the edge of total darkness, whereas during civil twilight there is sufficient light for many ordinary activities.’
(The Encyclopedia Americana)

‘As thus defined, the times of ending of the three sorts [or degrees] of [morning] twilight can be precisely calculated.’
(McGraw-Hill Encyclopaedia of Science and Technology)

Fig. 35 Three Degrees of Morning Twilight



Purple Light at Morning Twilight

‘The purple light is the faint purple glow observed on clear days over a large region of the eastern sky before sunrise.’ (McGraw-Hill Dictionary of Scientific and Technical Terms)

‘... is a mixture of red light.’ (The Encyclopedia Americana)

‘The purple light is a highly variable phenomenon but usually it rapidly broadens ... and seems to intensify ...’ ‘When the sun is about 6° below the horizon it has ... brightened the horizontal bands ... and it lasts about half an hour ...’ (Encyclopaedia Britannica, 1967)

Civil Twilight in Sri Lanka

Of the three degrees of morning twilight, civil twilight seems to agree best with the descriptions of ‘dawnrise’ (*aruṇuggamana*) given in the Pāli Texts. To repeat the pertinent passages about civil twilight:

- ‘if the sky is clear it is usually practicable *to carry on ordinary outdoor occupations without artificial light.*’ (McGraw-Hill Encyclopaedia of Science and Technology)
- ‘... *natural illumination* is sufficient for conducting ordinary outdoor activities.’ (Encyclopaedia Britannica, 1967)
- ‘When the sun is about 6° below the horizon it [*the purple light, a mixture of red light*] has ... brightened the horizontal bands ... and it lasts about half an hour ...’ (ibid.)

For the pertinent Pāli passages please see:

- No Need of Artificial Light at Dawnrise (p.61);
- It is Day at Dawnrise (p.64);
- Work Can Be Carried Out by Natural Light at Dawnrise (p.66);
- Travel Can Take Place by Natural Light at Dawnrise (p.67), etc.

According to the Department of Meteorology, Colombo, Sri Lanka, the official times for civil twilight, and for its duration till sunrise over a year in Sri Lanka are:

VII - Dawnrise and Scientific Explanations

Table II Civil Twilight and Sunrise in Sri Lanka

Date	Civil Twil.	Dur-ation	Sun-rise	Date	Civil Twil.	Dur-ation	Sun-rise	Date	Civil Twil.	Dur-ation	Sun-rise	
January			April (cont'd)			September						
1	5:59	0:23m	6:22	8	5:44	0:21m	6:05	6	5:41	0:21m	6:02	
3	6:00	0:23m	6:23	11	5:43	0:21m	6:04	12	5:40	0:21m	6:01	
6	6:02	0:22m	6:24	13	5:42	0:21m	6:03	18	5:39	0:21m	6:00	
8	6:03	0:22m	6:25	15	5:41	0:21m	6:02	24	5:38	0:21m	5:59	
11	6:04	0:22m	6:26	18	5:40	0:21m	6:01	October				
15	6:05	0:22m	6:27	20	5:39	0:21m	6:00	1	5:37	0:21m	5:58	
19	6:06	0:22m	6:28	23	5:38	0:21m	5:59	9	5:36	0:21m	5:57	
24	6:07*	0:22m	6:29	25	5:37	0:21m	5:58	30	5:37	0:21m	5:58	
February			May			November						
10	6:07	0:21m	6:28	2	5:34	0:22m	5:56	6	5:37	0:22m	5:59	
16	6:06	0:21m	6:27	6	5:33	0:22m	5:55	11	5:38	0:22m	6:00	
20	6:05	0:21m	6:26	11	5:32	0:22m	5:54	14	5:39	0:22m	6:01	
24	6:04	0:21m	6:25	18	5:31+	0:22m	5:53	18	5:40	0:22m	6:02	
27	6:03	0:21m	6:24	June			21	5:41	0:22m	6:03		
March			July			23	5:42	0:22m	6:04			
1	6:02	0:21m	6:23	3	5:32	0:22m	5:54	26	5:43	0:22m	6:05	
3	6:01	0:21m	6:22	11	5:32	0:23m	5:55	28	5:44	0:22m	6:06	
6	6:00	0:21m	6:21	17	5:33	0:23m	5:56	30	5:45	0:22m	6:07	
8	5:59	0:21m	6:20	22	5:34	0:23m	5:57	December				
10	5:58	0:21m	6:19	26	5:35	0:23m	5:58	3	5:46	0:22m	6:08	
13	5:57	0:21m	6:18	30	5:36	0:23m	5:59	5	5:47	0:22m	6:09	
15	5:56	0:21m	6:17	August			7	5:48	0:22m	6:10		
17	5:55	0:21m	6:16	4	5:38	0:22m	6:00	9	5:49	0:22m	6:11	
19	5:54	0:21m	6:15	9	5:39	0:22m	6:01	11	5:49	0:23m	6:12	
21	5:53	0:21m	6:14	14	5:40	0:22m	6:02	13	5:50	0:23m	6:13	
23	5:52	0:21m	6:13	19	5:41	0:22m	6:03	15	5:51	0:23m	6:14	
25	5:51	0:21m	6:12	25	5:42	0:22m	6:04	17	5:52	0:23m	6:15	
27	5:50	0:21m	6:11	September			19	5:53	0:23m	6:16		
29	5:49	0:21m	6:10	5	5:43	0:22m	6:05	21	5:54	0:23m	6:17	
31	5:48	0:21m	6:09	18	5:43	0:22m	6:04	23	5:55	0:23m	6:18	
April			October			November						
2	5:47	0:21m	6:08	29	5:42	0:21m	6:03	25	5:56	0:23m	6:19	
4	5:46	0:21m	6:07	December			27	5:57	0:23m	6:20		
6	5:45	0:21m	6:06	January			29	5:58	0:23m	6:21		
									31	5:59	0:23m	6:22

Fig. 36

ALL TIMES ARE IN SRI LANKA STANDARD TIME (GMT +5.30 hrs)
 DEPARTMENT OF METEOROLOGY, COLOMBO, SRI LANKA
 Courtesy: Dept. of Meteorology, Colombo

According to the above official times, Civil Twilight in Sri Lanka begins:

* At the latest at **6.07** a.m. (Jan.24 - Feb.10); 21 to 22 min. before sunrise.

+ At the earliest at **5.31** a.m. (May 18 - Jun.02); 22 min. before sunrise.

Its maximum duration is *23 min.* on Jun. 11 - 30, and Dec. 11 - Jan. 3.

Global Variations in Morning Twilight

The time of morning twilight, as of sunrise, varies from country to country, from region to region within a country, as well as from day to day within a region. Thus:

‘For each of the three kinds [or degrees] of commonly used twilight limits, the duration of [morning] twilight varies considerably geometrically with latitude and calendar date due to the fact that the sun’s diurnal path across the observer’s celestial sphere meets his horizon at quite different angles and declinations of different latitudes and times of year. ... When the sun approaches the horizon obliquely, and is of high declination, a longer time (earth rotation) is required to bring the sun into the limiting depression angle.’
(Van Nostrand Scientific Encyclopaedia)

‘[Morning] twilight is generally shorter at the equator, where the sun’s path toward the horizon is more nearly vertical than the higher latitudes.’ *(The Columbia Encyclopaedia)*

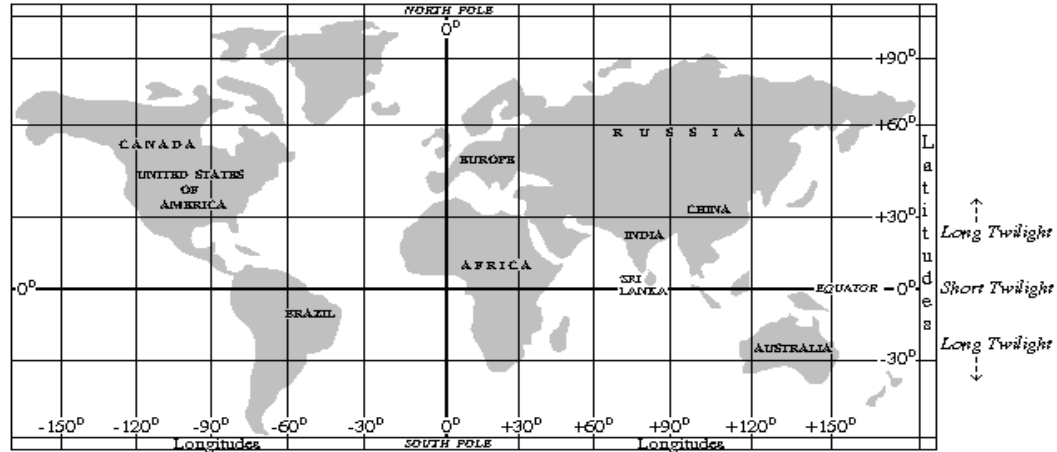
‘... at the tropics it [morning twilight] lasts only a few minutes; near the poles, it may last all night.’
(The Dictionary of Science)

In this way,

‘[Morning] twilight illumination depends on several factors, including the amount of dust in the upper atmosphere, the degree of cloud cover, the observer’s latitude and altitude above sea level, and the season of the year. [Morning] twilight typically has the shortest duration at the equator and increases in duration as one approaches the North or South Poles.’
(The Encyclopedia Americana)

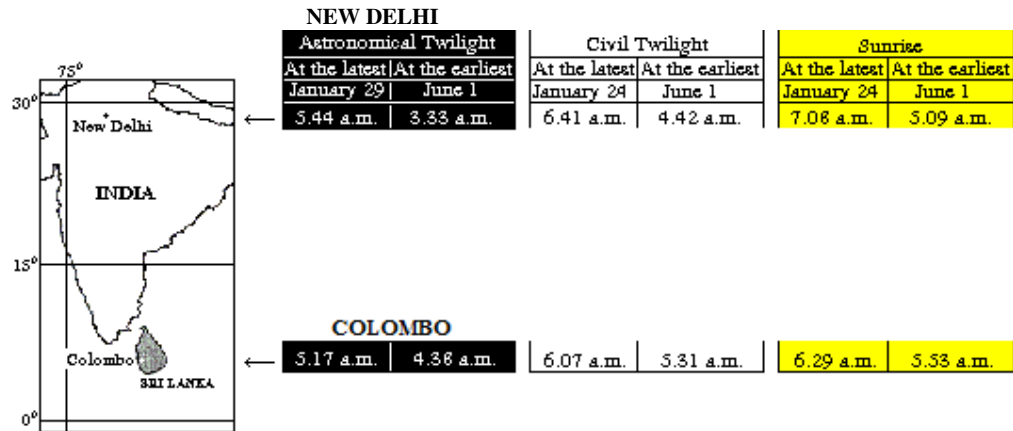
(Please see Figs.37 and 38 below.)

Fig. 37 Global Variations in Morning Twilight



An example of how astronomical twilight, civil twilight and sunrise varies from country to country is given here by comparing New Delhi (India) and Colombo (Sri Lanka):

Fig. 38 Variations in Astronomical/ Civil Twilight and Sunrise between New Delhi and Colombo ⁷⁰



⁷⁰ The times for the latitude of New Delhi are from *The Astronomical Almanac* and *The Indian Astronomical Ephemeris: Astronomical Twilight, Civil Twilight, Sunrise, lat. +30°*. But, as advised by the Dept. of Meteorology, Colombo, in order to obtain the official *local time* for New Delhi, 11 minutes had to be added to the longitude of New Delhi (+77°.17). For the official times of Colombo (lat. + 6°.55, long. +79°), please see pp.12, 108.

According to these times,

Astronomical twilight (first white light)

begins in New Delhi:

- at the latest *1hr 24 min.* before sunrise,
- at the earliest *1hr 36 min.* before sunrise.

begins in Colombo:

- at the latest *1hr 12 min.* before sunrise,
- at the earliest *1hr 15 min.* before sunrise.

Civil Twilight (sharp visibility)

begins in New Delhi:

- at the latest *24 min.* before sunrise,
- at the earliest *27 min.* before sunrise.

begins in Colombo:

- at the latest *21 min.* before sunrise,
- at the earliest *23 min.* before sunrise.⁷¹

Civil Twilight and Dawnrise in Sri Lanka

In Sri Lanka, civil twilight begins 21-23 minutes before sunrise, at which time, as mentioned above (p.106) ‘if the sky is clear, it is usually practicable to carry on ordinary outdoor *occupations* without artificial light’: at civil twilight, the natural light and visibility is ample.

But according to the direct observations and photographs (in Sri Lanka; Figs.19-20, p.18f), if the sky is clear and one’s surroundings are open, are not enclosed by trees, rocks, hills etc., substantial visibility obtains earlier than 21-23 minutes before sunrise; it obtains already 30-35 minutes before. Under those circumstances, one can see a path, people, small children and can make out their features; one can see birds, dogs and snakes etc.; one can see trees and their leaves, grass, flowers, goods, and tools etc.; one can distinguish between green, red and blue etc.; and hence one can go from place to place by natural light. Already 30-35 minutes before sunrise (but not earlier), artificial light is not required at all.

The degree of visibility at this time would on all counts correspond to the degree of visibility understood to obtain in the contexts for which the Pāli Texts employ the term *aruṇuggamana* (dawnrise), or one of its synonyms: *vibhātāya rattiya* (when the night became light), *āloke sañjāte* (when it grows light), *nandimukhī ratti* (night with a joyful face), *odāta-disā-mukhī ratti* (night with a white face in its quarters).

The natural light and visibility at this time would, as already discussed (p.44), correspond to the degree of visibility required, for example, for the robbers to see that the

⁷¹ Please see Table II, p.108.

tree-stump was in fact a monk (p.40); for the caravan leader to see that the oxen refused to move because of a baby boy in the road (p.41); for the villagers to see that their false mango-tree had not worked, and the travellers were alive and well (p.42); for Paṭācāra to follow the path her husband had taken, and for her to see that his corpse lay blue and rigid on the ant-hill (p.35). The natural light is, thus, of such a degree that there is considerable visibility close at hand.

Thus, according to the Pāḷi Texts and the direct observations, the necessary features of dawnrise (*aruṇuggamana*) over a year in Sri Lanka manifest themselves 30-35 min. before sunrise. For practical reasons, however, the author of this paper suggests 30 min. (half an hour) before sunrise as a safe **standard time for dawnrise** over a year in Sri Lanka. (Please see Table III below.)

The individual monk, however, who lives inside or outside Sri Lanka, might be well advised to make it a habit to ultimately guide himself according to the features of natural light (from the sun) in the sky and the considerable visibility in his surroundings short before sunrise. That way his Vinaya would be safe, whatever the clock-time, whatever the place.

Moreover, when being outside Sri Lanka, since the time of civil twilight can be exactly measured all over the globe and can be found in websites (try for example <http://www.timeanddate.com/worldclock/sunrise.html>, with all columns in the modifying parameters selected), it may be better to use that time instead of a fixed time before sunrise for the time of dawnrise (*aruṇuggamana*). Also, if civil twilight time is taken, there will be less room for doubt from anyone that dawnrise (*aruṇuggamana*) has actually passed.

Besides, it is good to keep in mind that when one moves east within a time zone the corresponding times of dawnrise, civil twilight, sunrise, noon, etc. occur earlier, since one moves towards the sun, and that local time varies when one changes latitude as well as longitude.

Table III below gives the official time of sunrise and noon* over a year in Sri Lanka, obtained from the Department of Meteorology, Colombo, Sri Lanka, and also the time of dawnrise (*aruṇuggamana*) as 30 min. (half an hour) before sunrise. It shows thus the 'proper time for eating' that runs, as mentioned above (p. 84), from dawnrise to noon.

* There are ways to decide noon, the method with the vertical stick on the ground and no shadow, looking in an almanac, some dictionaries, adding the time of sunrise and sunset and dividing by two, contacting the local airport or meteorological department, or accessing the internet at, for example, <http://solar-noon.com>;---<http://www.timeanddate.com/worldclock/sunrise.html>.

When Is Dawn (*aruṇa*)? When Is Dawnrise (*aruṇuggamana*)?

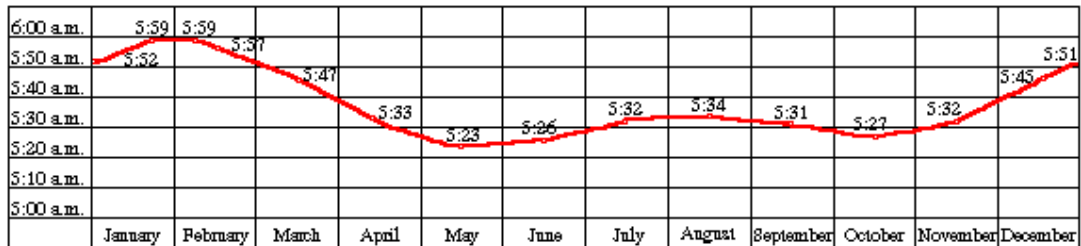
Table III Dawnrise, Sunrise and Noon in Sri Lanka

Date	Dawn-rise	Sun-rise	Noon	Date	Dawn-rise	Sun-rise	Noon	Date	Dawn-rise	Sun-rise	Noon
January				April (cont'd)				September			
1	5:52	6:22	12:14	9	5:35	6:05	12:12	7	5:32	6:02	12:09
3	5:53	6:23	12:15	11	5:34	6:04	12:12	13	5:31	6:01	12:07
6	5:54	6:24	12:16	14	5:33	6:03	12:11	19	5:30	6:00	12:05
8	5:55	6:25	12:17	16	5:32	6:02	12:10	25	5:29	5:59	12:02
10	5:56	6:26	12:18	18	5:31	6:01	12:10	October			
14	5:57	6:27	12:19	21	5:30	6:00	12:09	2	5:28	5:58	12:00
18	5:58	6:28	12:21	23	5:29	5:59	12:09	10	5:27	5:57	11:58
24	5:59	6:29	12:22	26	5:28	5:58	12:08	31	5:28	5:58	11:54
February				29	5:27	5:57	12:08	November			
10	5:58	6:28	12:24	May				7	5:29	5:59	11:54
16	5:57	6:27	12:25	3	5:26	5:56	12:07	11	5:30	6:00	11:55
20	5:56	6:26	12:24	7	5:25	5:55	12:07	15	5:31	6:01	11:55
23	5:55	6:25	12:24	11	5:24	5:54	12:07	18	5:32	6:02	11:56
27	5:54	6:24	12:23	19	5:23	5:53	12:07	21	5:33	6:03	11:56
March				31	5:23	5:53	12:08	24	5:34	6:04	11:57
1	5:53	6:23	12:23	June				27	5:35	6:05	11:58
4	5:52	6:22	12:22	4	5:24	5:54	12:09	29	5:36	6:06	11:59
6	5:51	6:21	12:22	12	5:25	5:55	12:10	December			
9	5:50	6:20	12:21	17	5:26	5:56	12:11	1	5:37	6:07	12:00
11	5:49	6:19	12:21	22	5:27	5:57	12:12	3	5:38	6:08	12:01
13	5:48	6:18	12:20	27	5:28	5:58	12:13	5	5:39	6:09	12:02
15	5:47	6:17	12:20	July				8	5:40	6:10	12:03
18	5:46	6:16	12:19	1	5:29	5:59	12:14	10	5:41	6:11	12:04
20	5:45	6:15	12:18	5	5:30	6:00	12:15	12	5:42	6:12	12:05
22	5:44	6:14	12:18	10	5:31	6:01	12:16	14	5:43	6:13	12:06
24	5:43	6:13	12:17	14	5:32	6:02	12:16	16	5:44	6:14	12:07
26	5:42	6:12	12:16	20	5:33	6:03	12:17	17	5:45	6:15	12:07
28	5:41	6:11	12:16	26	5:34	6:04	12:17	19	5:46	6:16	12:08
30	5:40	6:10	12:15	August				21	5:47	6:17	12:09
April				6	5:35	6:05	12:16	23	5:48	6:18	12:10
1	5:39	6:09	12:15	19	5:34	6:04	12:14	25	5:49	6:19	12:11
3	5:38	6:08	12:14	30	5:33	6:03	12:11	28	5:50	6:20	12:12
5	5:37	6:07	12:13					30	5:51	6:21	12:13
7	5:36	6:06	12:13					31	5:51	6:21	12:13

Fig. 39

Dawnrise: 30 min. before Sunrise

Fig. 40 Mean Variations of Dawnrise in Sri Lanka



Chapter VIII

Conclusion

Aruṇuggamana (dawnrise) is a Pāḷi term, the meaning of which is very important to a Buddhist monk, as it is a crucial offence criterion for not unimportant precepts in his monastic rule (*Vinaya*). Furthermore, the precepts in question are in several cases directly related to his daily life.

The preceding seven chapters have therefore been an attempt to determine what is meant by the term *aruṇuggamana* (dawnrise), so as to make it possible for monks to know how on that score to keep their *Vinaya*, how to observe their precepts.

To determine the meaning of a Pāḷi term means in fact to try to determine what it meant when Pāḷi was 'alive'. And the only place where that can be found is in the Pāḷi literature. The Pāḷi literature is the only place where the Pāḷi language can be said to 'live'.

The preceding seven chapters have as a consequence seen the discussion of a wide range of Pāḷi Texts, Canonical and post-Canonical. The discussion has been not only a question of looking to the Pāḷi Texts for evidence, but to secure further substantiation of that evidence from further Texts: hence the width of the range.

Vedic texts have occasionally also been referred to, as the language and concepts therein and the history thereof is close to the Pāḷi. These many ancient texts have been supplemented with a selection of modern scientific texts. The phenomena they both refer to have been brought to life, as it were, by the inclusion of photographs.

The discussion has come to an end, which is why it would perhaps be a good idea to summarize the chief points.

The actual 'offence criterion' (*āpatti-aṅga*) for many *Vinaya* rules is not *aruṇa* (dawn), as is often assumed, but *aruṇuggamana* (dawnrise).⁷²

The distinct features of *aruṇa* (dawn) versus *aruṇuggamana* (dawnrise) are:

<i>aruṇa</i> (dawn)	<i>aruṇuggamana</i> (dawnrise)
<ul style="list-style-type: none">• A dim red radiance of the sun that appears in the centre of the eastern horizon.	<ul style="list-style-type: none">• The rising (<i>uggamana</i>) of the dim red radiance (<i>aruṇa</i>) until it reaches its culmination, has become an intense red, and covers the whole eastern horizon: the 'head of dawn' (<i>aruṇa-sīsa</i>) rises.
<ul style="list-style-type: none">• It is approx. an hour before sunrise. (Sri Lanka)	<ul style="list-style-type: none">• It is approx. half-an-hour before sunrise. (Sri Lanka)

⁷² Please see Chapter II for a full discussion of this issue.

- | | |
|---|---|
| <ul style="list-style-type: none"> • Apart from perhaps star- and moonlight, the four quarters are dark, sometimes almost black. • It is clearly night; the night sky is as at midnight: it is dark. • Non-visibility or very poor visibility (perhaps because of the moon and stars) prevails, as at midnight. • Objects are not visible. • There is no natural light: artificial light such as torch- or lamp-light is required. • Ordinary activities such as work, attending to one's toilet, and receiving and eating food cannot be done without artificial light. • Local movements and travel cannot be done without artificial light. | <ul style="list-style-type: none"> • Sunlight diffuses to all four quarters. On clear days the four quarters are clearly white. • A new day has clearly begun; night has clearly passed; darkness has been dispelled; it has become light. The night sky has acquired a bright and joyful 'face'. • Natural light (from the sun) and considerable visibility prevails. • Objects are naturally visible: people, small children, paths, ponds, flowers, leaves etc., the colours blue, red, yellow, and white etc. • There is sunlight: artificial light is not required. • Ordinary activities such as work, attending to one's toilet, and receiving and eating food can be done without artificial light. • Local movements and travel can be done with ease by natural light. |
|---|---|

- The times of dawn, dawnrise and sunrise vary from day to day and from region to region. For example, in the region of Sri Lanka dawnrise occurs usually about 30 minutes before sunrise, whereas in the region of Northern India it occurs about 45 minutes before.⁷³ The determining criteria for the time of dawnrise, however, are: 'the four quarters becoming white' and 'the beginning of considerable visibility'.⁷⁴

⁷³ The approx. time of dawnrise in Northern India is estimated here from Fig.38 Variations in Astronomical/ Civil Twilight and Sunrise between New Delhi and Colombo, p.110.

⁷⁴ Please see pp.27, 40

Appendix i

Discussion of the Colour of Dawn in the *Vinayālaṅkāra Subcommentary* ⁷⁴

[Question:]

‘What is its [dawn’s] colour?’

[Answer:]

‘Here, its colour may be a dim red. For the *Abhidhānappadīpika* [dictionary] says: “Dawn is a light red.” And its subcommentary: “Dawn is a light, dim red, like the eyes of a fish.” Or, as stated in the *Vimativinodanī* [Subcommentary]: “a distinctive radiance of an increasingly intense red.”

One should therefore understand that dawn (*aruṇa*) is only the **red radiance** of the sun, and **not a white** radiance and so forth.’

[Question:]

‘If it is so, in the exposition of the chapter on the Pātimokkha-suspension [‘**When the last watch had passed** (*nikkhante pacchime yāme*), **when dawn arose** (*ud-dhaste aruṇe*), **when the night had a joyful face** (*nandimukhiyā rattiyā*), for the third time did the Venerable Ānanda ... speak thus to the Exalted One: “... Let the Venerable One recite the *Pātimokkha*.”], why did it say in the *Vimativinodanī* [Subcommentary]: “In the Canonical Pāli Text, **‘when the night had a joyful face**

[Pucchā:]

‘*Kīdiso tassa vaṇṇo’ ti?*’

[Vissajjanā:]

‘*Ettha, abyatta-ratta-vaṇṇo tassa vaṇṇo bhavē. Vuttañhi Abhidhānappadīpikāyaṃ (v.97): “Aruṇo kiñci ratto’ thā’ ti.” Taṭṭikā-yañca [Abhpṭ 57]: “Kiñci ratto abyattaratta-vaṇṇo aruṇo nāma, yathā macchassa akkhī’ ti.” Vimativinodaniyañca [1.463]: “Vaddhana-ghana-ratto pabhāviseso’ ti.”*

Tasmā sūriyassa rattappabhā yeva aruṇo nāma, na setappabhādayo’ ti daṭṭhabbam.

[Pucchā:]

‘*Yadi evaṃ, Pātimokkhatṭhapanakkhandhakavaṇṇanāya [‘Tatiyaṃpi kho āyasmā Ānando ... nikkhante pacchime yāme, ud-dhaste aruṇe, nandimukhiyā rattiyā, ... Bhagavantaṃ etadavoca: “...Uddisatu, bhante, Bhagavā ... pātimokkhan’ ti.” (Vin ii. 236; A iv.205; Ud 52)] Vimativinodaniyaṃ (ii. 261): “Pāliyaṃ pana ‘nandimukhiyā’ ti odāta-disā-mukhatāya tuṭṭhamukhiyā’ ti”, vuttam? Taṃ katham yujjeyyā’ ti?’*

⁷⁴ ‘A Vinaya [subcommentarial] compilation by [Ven.] Tipiṭakālaṅkāra, a monk of Prome in Burma, fifteenth century.’ (*Dictionary of Pāli Proper Names*, G.P. Malalasekera, Luzac & Company Ltd., London, 1960.) Please see also **Surakitti**, (ibid.).

(*nandimukhiyā rattiyā*)’ means: when it [the night] had a face of gladness (*tuṭṭhi*) due to its face becoming **white** (*odāta*) in its quarters.”? How does this explanation agree [with the *Vimativinodani*’s above explanation: “Dawn is a distinctive radiance of an increasingly intense **red**.”] ?

[Answer:]

‘Not that it does not agree. For there it was explained that at the time when dawn has arisen its [the night’s] face becomes **white** (*odāta*) in its quarters due to the luminosity of dawn (*aruṇobhāsa*), and not that the luminosity of dawn itself is white. For it is explained in the *Udāna Commentary*: “**When the night had a joyful face** (*nandimukhī ratti*) means: due only to the rise of dawn and radiance of dawn (*aruṇappabhā*) did the night appear to have a face that brings joy to beings living dependent on sunlight. The meaning is that it [the night] **became light** (*vibhātamānā*).” And in the *Jātaka Commentary*:

“Like the quarter that appears to have
A form so glorious
At the expiration of night (*jighañṇarattiṃ*)
When dawn arises (*aruṇasmimuhate*),
So do you seem to me, O deity!”

The explanation of this verse is:
There, **at the expiration of night** (*jighañṇarattiṃ*) means: at the end of night (*pacchimarattiṃ*). The meaning is, at the termination of night (*rattipariyosāne*).
‘**When arises** (*uhate*) means: when dawn arises (*aruṇe uggate*). ‘**The quarter** (*yā*) means: the eastern quarter that appears to

[*Vissajjanā*:]

‘*No na yujjeyya. Tattha hi aruṇuggatakāle aruṇobhāsenā odātadisāmukhabhāvō vutto, na aruṇobhāsassa odātabhāvō. Vuttañhetam Udānaṭṭhakathāyaṃ* (UdA 124): “**Nandimukhiyā**’ti aruṇassa uggatattā eva aruṇobhāsaya sūriyālokūpajīvino satte nandāpanamukhiyā rattiyā jātāya. **Vibhāyamānāyā**’ti attho’ti”. *Jātakaṭṭhakathāyañca*:

“*Jighañṇarattiṃ aruṇasmimuhate,
Yā dissati uttamarūpavaṇṇinī,
Tathūpamā maṃ paṭibhāsi, devate,
Ācikkha me taṃ katamāsi accharā’ti?*”
(JA v.403)

Imassa gāthāya atthavaṇṇanāyaṃ:
“*Tattha jighañṇarattiṃ*’ti: *pacchimarattiṃ*. ‘*Rattipariyosāne*’ti attho. ‘*Uhate*’ti: *aruṇe uggate*. ‘*Yā*’ti: *yā puratthimā disā rattavaṇṇatāya uttamarūpadharā hutvā dissatī’ti*”.
(JA v.403)

have a form so glorious, due to its **redness** (*rattavaṇṇatā*).”

Thus was explained the **redness** (*rattavaṇṇatā*) in the eastern quarter at the time of dawnrise. Therefore, because dawn rises at this time,

- [i] a red band (*rattabhāgo*) can be discerned in the eastern quarter, and
- [ii] a whiteness (*odātabhāvo*) in the remaining quarters due to the diffusion of sunlight.

Wise [monks] should reflect well on these questions and answers, and understand and bear in mind that **dawn** (*aruṇa*) is only a **red** luminosity.’

Evaṃ aruṇuggatasamaye puratthimadisāya rattavaṇṇatā vuttā. Tasmā tasmiṃ samaye aruṇassa uṭṭhitattā,

[i] *puratthimāya disāya rattabhāgo,*

[ii] *sūriyālokassa patthaṭattā
sesadisānaṃ odātabhāvo viññāyati.*

Imaṃ pañhavissajjanaṃ sādhukaṃ manasikarivā paṇḍitehi ‘rattobhāsoyeva aruṇo’ti, pacceṭabbo sallakhetabbo’ti.

(Vl 1.23)

Appendix ii

Additional Images and Data

More evidence for the phenomenon of dawn and dawnrise is found in this Appendix, where further observations and empirical data from a newspaper reporter and other monks are given.

Dawn

Date: 1st - 15th February, 1997

Location: Adam's Peak (*Siri Pada*, Sri Lanka's second highest mountain, alt. 2243 m), south-central Sri Lanka

Prospect: Eastern horizon

PHOTOGRAPH AND ARTICLE IN THE *BUDU SARANA* NEWSPAPER
23rd March, 1997



An instant before
the sun itself
rises on the hori-
zon

Fig. 41

A Glorious Instance of Colours on Earth

“It is very close to six o’clock [6.00] in the morning. Dressed in white, the devotees on the terrace on Adam’s Peak [a holy mountain in Sri Lanka] are seen to assemble with much ardour. Right now, the appearance of the sky in the horizon is seen to slowly turn *orange*. To the left and right, a *dim red* is visible. The colours change from moment to moment. The hands of the wrist-watch say ten past six [6:10] in the morning. Right now, the dim light at the end of the horizon is seen slowly to become distinct. In one place the colour of the sky goes from orange to *red*. As the red changes from moment to moment, impatience can be sensed in the assembled crowd. The devotees know now that from somewhere on the horizon which is brighter, the sun will rise

adorned with his radiance. As one minute passes the next, rays of light in the distant sky begin to reflect on the surface of the sea, as if a thousand powerful bulbs were lit all at once. Another moment passes. Suddenly the sun appears to rise from the horizon like a yellowish red wheel. After only a minute, the full sun rises up in the sky, one foot from the horizon. The radiant rays that issue from the sun reach now directly the terrace on Adam’s Peak.”

Article and photograph
by
Nimal Vijayatunga
Eheliyagoda,
Freelance Reporter

In correspondence with the author of the present paper, the author of the article, the newspaper reporter, Mr. Nimal Vijayatunga, provided further information:

- 1) *The times given in the article are the new daylight-saving time* (half-an-hour in advance of the ‘old’ standard time and employed in the present paper). Thus, the article’s:
 - a) ‘It is very close to six o’clock in the morning [6.00 a.m. ‘new time’]’ is very close to 5.30 a.m. (old time) — the approximate time when the orange and dim red were seen.
 - b) ‘The hands on the wrist-watch say ten past six in the morning [6.10 a.m. ‘new time’]’ is 5.40 a.m. (old time) — the approximate time when the red was seen.
- 2) *The reporter’s assignment took place between 1st - 15th February 1997, and the article was published on 23rd March, 1997.*

There is, between the observed times given in the article, and the official & extrapolated times, a discrepancy of only 2-3 minutes (Please see Fig.42 below):

Date: 1st - 15th February, 1997

Fig. 42

OBSERVED TIME	PHENOMENON	OFFICIAL & EXTRAPOLATED TIMES*	PHENOMENON
---	---	5.17 a.m.	first white (TW1)
5.30 a.m.	orange / dim red	5.27 a.m.	dim red (<i>aruṇa</i>)
5.40 a.m.	red	5.37 a.m.	red
---	---	5.59 a.m.	intense red
---	---	6.29 a.m.	sunrise

Date: 28th April, 1999

Location: The highest hill in the Nāyana forests, north-central Sri Lanka

On 27th April, 1999, a Ven. Galle Saṅghasobhana (Sri Lanka), a Ven. Visārada (Australia), and a group of other Sinhalese monks spent the night on top of the highest hill in the Nāyana forests in order to observe the dawn of the next day. Ven. Galle Saṅghasobhana and Ven. Visārada wrote down what they saw in the eastern night sky in the small hours of 28th April. Both Venerables mentioned that there had been mist on the horizon. This would account for the minor discrepancies between their observed times and the official & extrapolated times which are:

Date: 28th, April, 1999

Fig. 43

OBSERVED TIME	PHENOMENON	OFFICIAL & EXTRAPOLATED TIMES*	PHENOMENON
4.52 a.m.	Beginning of white light	4.46 a.m.	Beginning of white light (TW1, 6 min. earlier)
5.12 a.m.	Beginning of dim red	4.56 a.m.	Beginning of dim red (dawn (<i>aruṇa</i>), 18 min. earlier)
5.58 a.m.	Sunrise	5.58 a.m.	Sunrise

* For the official times please see Table I, p.12; for the method of extrapolation p.13.

Dawnrise

Date: 23rd May, 1999

Location: Nāuyana Forest, North-Central Sri Lanka

On 23rd May, 1999, Ven. Galle Saṅghasobhana (Sri Lanka), who had read the manuscript of this paper, went out of his dwelling in the small hours of the morning to observe the features of dawnrise (*aruṇuggamana*) as they are described in the Pāli Texts. He wrote down and also described to the author what he saw in the night sky and surroundings:

At 5.20 a.m. the white light spread to all four quarters, and objects in the surroundings became visible. Paths, leaves, the colours of flowers, and even the smaller lines on the palms of his hands could be seen. Sunrise on that day was at 5.53 a.m. (official time). Thus, it was 33min. before sunrise that Ven. Galle Saṅghasobhana observed the features of dawnrise (*aruṇuggamana*).⁷⁵

⁷⁵ The reasons for the slight discrepancies in minutes (why dawnrise occurs **33min** before sunrise on 23rd May; **35min** before sunrise on 28th-31st December, (Fig.11); and **31min** before sunrise on 27th March, (Fig.23)), are given in Chapter VII, *Dawnrise and Scientific Explanations*, 'Global Variations of Morning Twilight' (p.109).

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