

ISSN 0972- 1800



BIONOTES

VOLUME 23, NOS. 2 & 3

QUARTERLY

APRIL--SEPTEMBER, 2021



Date of Publication: 4th October, 2021

BIONOTES

A Quarterly Newsletter for Research Notes and News
On Any Aspect Related with Life Forms

Founder

Late Dr. R. K. Varshney, Aligarh, India

Board of Editors

Peter Smetacek, Butterfly Research Centre, Bhimtal,
India
petersmetacek@gmail.com

V.V. Ramamurthy, New Delhi, India
vvrento@gmail.com

Zdenek F. Fric, Biology Centre, Czech Academy of
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CZ-37005 Ceske Budejovice, Czech Republic.
fric@entu.cas.cz.

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sn@saturniidae.com

R.C. Kendrick, Hong Kong SAR
hkmoths@gmail.com

Devanshu Gupta, Zoological Survey of India, Kolkata,
India
devanshuguptagb4102@gmail.com

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Address for Correspondence

Butterfly Research Centre, Bhimtal,
Uttarakhand 263 136, India. Phone: +91
8938896403.

Email: butterflyresearchcentre@gmail.com

From Volume 21

Published by the Entomological Society of India (ESI), New Delhi (Nodal Officer: V.V.
Ramamurthy, ESI, New Delhi)

And

Butterfly Research Centre, Bhimtal
Executive Editor: Peter Smetacek
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Cover Photo of founder of BIONOTES *Late* Dr. R.K. Varshney

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**ARECA PALM *DYPsis LUTESCENS* (ARECACEAE) AS NEW
LARVAL HOST PLANT FOR THE GIANT REDEYE
BUTTERFLY *GANGARA THYRSIS* (INSECTA: LEPIDOPTERA:
HESPERIIDAE)**

RAJU KASAMBE

*Bombay Natural History Society, Dr. Sálím Ali Chowk, Shaheed Bhagat Singh Road, Opposite
Lion Gate, Mumbai, 400001, Maharashtra
r.kasambe@bnhs.org*

Reviewer: Peter Smetacek

Keywords: *Gangara thyrasis*, *Dypsis lutescens*, Arecaceae

The Giant Redeye *Gangara thyrasis* (Fabricius, 1775) (Insecta: Lepidoptera: HesperIIDae) is found in Mumbai city of Maharashtra. Within the city, it has been reported from urban habitats and urban gardens more often than from the forested areas of Sanjay Gandhi National Park.

The species is known to occur from Maharashtra to Kerala, in Andhra Pradesh; Himachal Pradesh to Northeast India and Andaman & Nicobar Islands (Varshney & Smetacek, 2015). It has been reported to occur in South India and has been photographed in the Western Ghats from Mumbai southwards to Kerala (Bhakare *et al.*, 2020). It was recently reported from BNHS Nature Reserve in Mumbai, Maharashtra (Kasambe, 2018).

Since September 2020, the author has been rearing caterpillars of butterflies in Mumbai area and especially in the Bombay Natural History Society (BNHS) Nature Reserve, which is a forested area spread over 33 acres nestled between Dadasaheb Phalke Chitra Nagari (aka Film City) and Sanjay Gandhi National Park in Mumbai City of Maharashtra, India. The Reserve also has a small butterfly garden spread over an area of around quarter of an acre.

In 2019, the author had seen one adult *G. thyrasis* in this Reserve nectaring on the flowers

of Crepe Ginger or Spiral Ginger *Costus speciosus*. On 6.iii.2020, a crushed specimen was found on the road leading to the Reserve. On 9.xi.2020 morning and on 6.xii.2020 evening, the author found adult butterflies nectaring on the white flowers of the Pinwheel Flower *Tabernaemontana divaricata* in urban habitat in Goregaon suburb of Mumbai.

On the same day he found a large caterpillar and two eggs of the species on roadside Areca Palm *Dypsis lutescens* (Family Arecaceae). The author bought a potted *D. lutescens* and released the caterpillar on it and kept the eggs on it. The caterpillar soon made a cell for itself and was seen feeding. Frass was seen under the plant. On 19.xi.2020 it started pupating by making a roll by sewing few leaves of the palm using its own saliva. An adult butterfly was seen flying in the apartment on 20.xii.2020.

The two eggs hatched on 14.xi.2020. The newborn caterpillars ate half of the egg shells and started folding leaf edges and made cells by sewing the edge with silk threads. For this they cut the leaves including the midrib. The caterpillars were observed feeding and growing on the plant itself. Next day, both shifted their locations, sewed three leaves together and made a pocket like cell in there. On 26.xi.2020, one fell down from the plant twice and was put back on the plant. The third

time it was found on ground, it was shifted (along with the second one) to a transparent rearing container and kept with some leaves for feeding. But both were found dead on 27.xi.2020.

A 5th instar caterpillar was found on leaves of *Dypsisa lutescens* on 01.i.2021 early in the morning at 05.10am. It was brought and released on the potted *D. lutescens* plant in the author's apartment. It was seen feeding for the next three days and frass was observed under the plant. However, on 4.i.2021, the caterpillar disappeared. Presumably it had wandered and rolled up leaves of the palm for pupation and the pupa could not be located. A freshly eclosed butterfly was seen in the apartment on 6.ii.2021. It flew after few hours.

From 26.xi.2020 to 01.iii.2021, a total of 15 eggs and 8 caterpillars were found on different *D. lutescens* plants in BNHS Nature Reserve, Mumbai (only two eggs) and the Goregaon urban area (remaining).

Following is the complete list of larval host plants reported till date for *Gangara thyraxis*: Arecaceae, *Borassus flabellifer*, *Calamus*, *Calamus pseudofeanus*, *Calamus rotang*, *Calamus thwaitesii*, *Calamus viminalis*, *Caryota urens*, *Chamaerops humilis*, *Cocos nucifera*, *Corypha umbraculifera*, *Licuala grandis*, *Licuala chinensis*, *Phoenix acaulis*, *Phoenix loureiroi* (Arecaceae) (Robinson *et al.* 2021, Nitin *et al.*, 2018.). *Zingiber officinale* (Zingiberaceae) has also been recorded once (Kalesh & Prakash, 2007). *Saccharum officinarum* (Poaceae) is recorded but this is doubtful and needs confirmation (Nitin *et al.*, 2018).

Conclusion

The repeated sightings of eggs and caterpillars of *Gangara thyraxis* on the *Dypsisa lutescens* (Family Arecaceae) plants and its rearing till eclosion of adult butterflies clearly indicates the regular use of the plant as a larval host. Looking at the list of larval host plants reported previously, this is clearly a new record of the larval host plant for the *G. thyraxis*. Also, the plantation of this plant as ornamental plant in cities like Mumbai could be helping it spread there.

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Fig.1: Egg on *Dypsis letescens* plant



Fig.2: Caterpillar First Instar making cell



Fig.3: Caterpillar in cell



Fig.4: Caterpillar 4 instar



Fig.5: Caterpillar 5 Instar



Fig.6: Pupation



Fig.7: Freshly eclosed butterfly



Fig.8: Areca Palm *Dypsis letescens* in Goregaon, Mumbai