

## Short Communication

### NEW RECORD OF EXOTIC SPECIES OF SLUG, *LAEVICAULIS HAROLDI* IN INDIA

#### INTRODUCTION

Molluscs found in all types of habitat and are most successful in terms of their ecology and adaptations. Over recent decades there has been an increasing interest in exploring systemic, biodiversity and ecology of molluscs as these are being used by various countries as food, medicine, ornamentation, etc. In India gastropods have been studied by, Subba Rao and Ghose, 2001; and Magare (2006) Magare (2013) studied on terrestrial molluscs of Satpuda ranges in India. Studies on land molluscs have been carried out by, Forcart, L. (1953) and Herbert, & Kilburn, (2004).

Arionid & Limacid slugs retain their internal shell and the organs grow instead into the cavity of the foot. It is therefore possible to conjecture that the slugs arose by a process of neoteny; the retention of early developmental characters by the adult. (Runham & Hunter, 1970).

#### MATERIAL METHOD

*Laevicaulis haroldi* is a terrestrial slug recorded only from Table Mountain, southwestern Cape, South Africa and are native from KwaZulu-Natal area. Species authority of the slug is Dundee, 1980. It is commonly known as Purcell's Hunter Slug, Generally Known as caterpillar slug, as it appears like caterpillars of Arthropods. While collecting molluscs towards western zone of Taloda city at the foot of Satpuda Mountains, Author found a slowly moving irregularly banded slug on the leaves of calatropis plants and stumps of wood

at the roadsides during September (11/09/2005). Since 2005 till today I have observed many slugs around Taloda zone. Author also found these slugs around Nasik district and in Ahmedabad road near Maharashtra boundary at roadside vegetation near old small temples.

#### SYSTEMATIC ACCOUNT

*Laevicaulis haroldi* Dee Saunders  
Dundee (1980)

Kingdom ANIMALIA

Phylum MOLLUSCA

Class GASTROPODA

Order STYLOMMATOPHORA

Family VERONICELLIDAE

Genus *Laevicaulis*

Species: *haroldi*

#### RESULTS

Slugs were found on leaves of Calotropis plant or on congress grass mostly. They were observed in the field with lens and data of length, size, weight, etc. is collected.

*Measurement: Length:* Length of adult slug is about 50-70 mm and about 10 mm wide. *Size:* Extended length: up to 85 mm. Width is about 10 mm in normal resting position.

#### MATERIAL EXAMINED

The largest specimen recorded is about 74 mm long as an adult Specimen. They were photographed by author, and measured size of

body and sole. These slugs prefer to move on leaves and stem of varieties of vegetation. In very rare case they were observed on land. They are herbivores and feed on leaves, flowers and fruits. The slug is creamy white in colour with white irregularly arranged bands on dorsal body wall gives wrinkled appearance. The body contract as central oval mass and when extends for movement becomes narrow and dorsoventrally flat at anterior body parts. Body is pale creamy or ivory coloured appearance with shining on dorsal body surface. Both ends of the slug are black, comparatively anterior end is darker than posterior end. At anterior end upper large and lower small pair of tentacles are sensory organs. Tentacles are faint gray coloured. Sole of the slug is very narrow and translucent at midventral line from anterior to posterior end. Lateral sides of sole gives creamy white patches on translucent creamy skin. (Fig. 1)



Fig. 1. A land slug, *Laevicaulis haroldi*.

### DISCUSSION

**Distribution:** They are found to be distributed in base line of Satpuda Mountains from Maharashtra to Gujarat. These slugs were recorded from different habitats of Nasik, Dhule, Nandurbar and Ahmedabad districts of India. They prefer marshy lands or habitat around watershed area. Slugs, *L. haroldi* are predominant in and around agricultural and horticultural land area. I found more than 56 individuals in three square meters area around Vanyavahir place at the foot of Satpuda Mountains

in Taloda (District - Nandurbar) of Maharashtra, India. (Fig. 2).

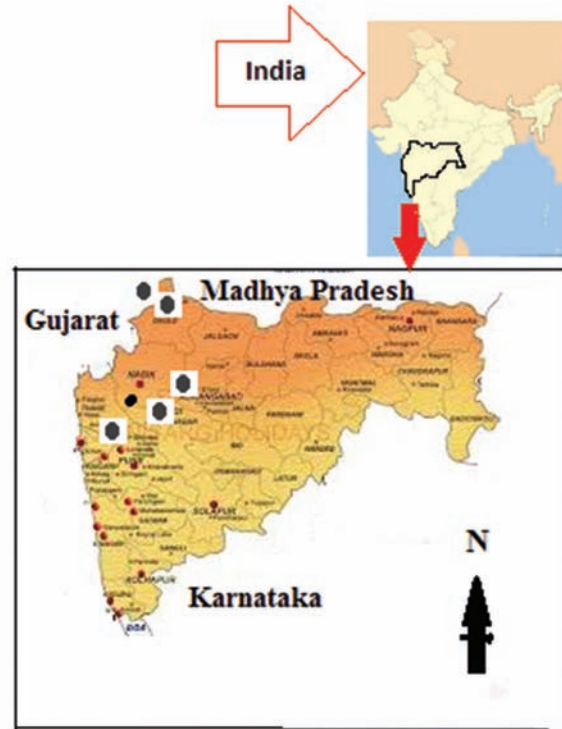


Fig. 2. Map of Maharashtra [India] showing localities of collection and observation of slug, *L. haroldi*.

### REMARKS

These slugs are creamy white or ivory coloured with wrinkled patches on dorsal body surface. Anterior tip is very dark gray or black coloured. The anterior dark colour spreads posteriorly and becomes faint towards posterior side. Posterior dark end is very limited. In some specimens the darker shade is continuous at the base of lateral body surface. Anterior pair of antenna is larger with eyes on the tip. (Fig. 1)

Activities of the slug are very slow as compared to other slugs recorded in India. These slugs are delicate and harmless to any other organism in ecosystem. They lay eggs inside the stones, decaying vegetation's or in burrows of soil. These slugs are able to withstand in varied nature as they were found to be recorded on plants like, Papaya, Calatropis, Congress grass, *Azadiracta indica*, etc. They feed on ripen or decaying leaves of plants. These slugs are mostly found isolated and rarely in groups.

**This slug is recorded in Africa only and now first time in India.**

### SUMMARY

[Diagnostic characters]

1. Body colour is creamy white to ivory with both ends black.
2. Body gives wrinkled appearance due to alternating bands of white and cream coloured.
3. The foot is narrow, translucent and midventral and extends from anterior to posterior end of the body.
4. Pedal gland secretes very limited thread like saliva.
5. Upper and lower pair of tentacles are organs of sense.
6. At the tip of upper tentacles, eyes are present.

7. Mostly found on herbs, shrubs or on trees, Very rarely found on ground.
8. They reside in termite mounds under dense vegetation.

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### REFERENCES

- Dee Saunders Dundee. 1980. *Laevicaulis haroldi*, a new veronicellid slug from Natal, South Africa (Gastropoda: Pulmonata) by THE NAUTILUS, Vol. 94 (3), pp. 118-120.
- \*Forcart, L. 1953. The Veronicellidae of Africa. *Anndu Musee Royal du Congo Belge* **23**: 110 pp.
- Herbert, D.G. & Kilburn, R.N. 2004. *Field guide to the land snails and slugs of eastern South Africa*. Natal Museum, Pietermaritzburg, 340 pp.
- Magare S.R. 2006. Biodiversity of molluscs from tribal zone of Nandurbar district Biodiversity and Environment, By B.N. Pandey and G.K. Kulkarni. APH publishing Corporatin New Delhi.
- Magare S.R. 2013. Biodiversity of Terrestrial Molluscs from North Maharashtra India. *Journal of Chemo and Biosphere*. Issue1: Vol. 2 pp. 13-19.
- Subba Rao M.V. and Ghose T.K. 2001. Terrestrial molluscs from Nepal. *J. Bombay nat. hist. Soc.*, 1957-1961 pp.

\* Used as a cross reference.

### S.R. MAGARE

*Department of Zoology, Zoology Research Laboratory,  
A.S. Mandal's, Arts and Commerce College Trust's,  
C.H.C. Arts, S.G.P. Comm. & B.B.J.P. Sci. College,  
Taloda (Nandurbar) Pin- 425413MS. India.  
Affiliated to North Maharashtra University, Jalgaon.  
Corresponding author: Shashikant Ratilal Magare.  
E-mail: drsrmagare@yahoo.co.in*