



## Short Communication



### New record of *Humbertium proserpina* (Humbert, 1862) from Tenkasi district, Tamil Nadu, India

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#### ABSTRACT

Species of genus *Humbertium* (Land planarian) are widely distributed in Southeast Asia, around greenhouses and gardens. However, taxonomy and cytogenetic data in this genus are restricted to a few species. Present report of hammerhead snake worm recorded from five falls in Courtallam, Tenkasi district, Tamil Nadu, India. Species was identified based on the photographs. This the first record of species from the Western Ghats in Tenkasi district of Tamil Nadu, India.

**Keywords:** *Humbertium proserpina*, New Record, Tenkasi, Tamil Nadu.

#### INTRODUCTION

Land flatworms are transported with earth and pot plants between continents and often become invasive (Justine et al., 2014, 2015; Winsor, 1983a). Since land flatworms are predators, they constitute a potential danger for the local soil fauna of the areas they invade. Among these land flatworms (family Geoplanidae), the hammerhead flatworms (subfamily Bipaliinae) are spectacular, by their large size, up to one meter, their distinctive colors, and the typical shape of their head, which makes them easy to identify (Winsor, 1983b). Land planarians are one of the most unusual and interesting creatures in and around greenhouses and gardens.

Terrestrial planarians are relatively species-poor groups with only 822 described nominal species worldwide (Winsor, 1997; Jones, 1998; Sluys, 1999; Carbayo et al., 2002). Over 160 species of the genus *Bipalium* Stimpson, 1857, are known in this Asiatic triclad group. This group was also poorly studied due to various reasons, namely restricted distribution, nocturnal habit, morphological similarity with earthworm etc. In India, after independence, except for a few early workers (Johri, 1952; Ramkrishna and Chauhan, 1960; Sharma and Sharma, 1977; Rout and Ghose, 1979), systematic study on this group is lacking. Recently (Kawakatsu and Jayashankar, 2013) reported a checklist of 27 known species with descriptions of three unidentified *Diversibipalium* spp. from India.

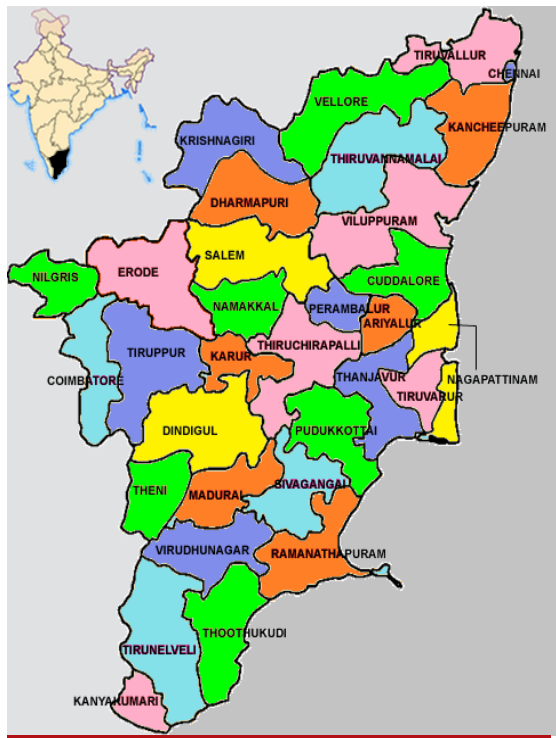
(Ogren and Sluys 2001) proposed another genus *Humbertium* on the basis of entry of ovovitelloducts to the female atrium. In *Humbertium*, the ducts enter the female atrium anteriorly while posteriorly as in

*Bipalium*. (Later, Kawakatsu et al., 2002) created one more genus *Diversibipalium* (the “diverse *Bipalium*”), to include all species whose anatomy of the sexual organ was unknown. In 2013, Kawakatsu and Jayashankar reported four genera viz. *Bipalium*, *Humbertium*, *Novibipalium* and *Diversibipalium* to list 27 Indian Bipaliid species with their distribution in India. The report is incomplete as there is no morphological description or biometric data of the concerned species. Previous researchers reported *Humbertium Proserpina* Humbert, 1862. Species from Hooker Estate, Naduvattam, Nilgiris, Tamilnadu state, India (Masaharukawakatsu & Munirathinamjayashankar, 2013). The present paper gives details of, first time record of *Humbertium Proserpina* from five falls in Courtallam, Tenkasi district, South Tamilnadu, India.

#### MATERIALS AND METHODS

##### Study area

The Land planarians were recorded from Courtallam Falls (8°55'55"N 77°16'09"E / 8.93194°N), Tenkasi district, Tamilnadu. It is located in Western Ghats to the South of Courtallam town and to the north of Courtallam Lower, The first lake in the descent of Chittar. It is located 5 km from the nearest town Tenkasi and 59 km from the nearest city Tirunelveli. Figure 1. showed map with Courtallam Falls (also called Kuttralam/Kuttalam Falls) is located in Tenkasi district in the South Indian state of Tamil Nadu bordering Kollam district, Kerala. The falls is located on the Western Ghats on the river Chittar. It is located 5 km from the nearest city Tenkasi district, Tamilnadu.



**Figure 1.** A map shows Courtallam Falls, Tenkasi district, Tamil Nadu, India.



**Figure 2.** *Humbertium Proserpina* species.

**RESULTS AND DISCUSSION**

**Salient features of *Humbertium proserpina***

The wide black band on dorsal interspersed by a thin white line, four lateral band running parallel to median black bands, dorsal jet black (Somnath Bhakat, 2020). Locality: Hooker state, Nadu-Vattam, Nilgiri, Tamil Nadu, India.

**Table 1. Scientific Classification**

Kingdom	Animalia
Phylum	Platyhelminthes
Class	Rhabditophora
Order	Tricladida
Sub order	Continenticola
Family	Geoplanidae
Sub Family	Bipaliinae
Genus	<i>Humbertium</i>
Species	<i>Humbertium proserpina</i> (Humbert, 1862)

**Etymology:** The genus is named for Alois Humbert, whose early paper (Humbert and Claparede, 1862), describes several bipaliid species from Sri Lanka, now included in the new genus.

**Descriptions**

Among these land flatworms (family Geoplanidae), The genera *Humbertium*, *Novibipalium*, and *Diversibipalium* were recently erected to accommodate some of this phylogenetic diversity. The majority of the 160 bipaliid species occur in the Indonesian archipelago, but the family ranges from Indonesia through Asia to Madagascar. Species are the primary Bipaliinae on Madagascar there are 23 Bipaliids known from Madagascar. The hammerhead flatworms (subfamily Bipaliinae) are spectacular, by their large size, up to one meter, their distinctive colors, and the typical shape of

their head which makes them easy to identify (Winsor, 1983). Most of the species have their origin in Asia but have invaded the world.

Among Previous researchers' schematic profiles of the copulatory apparatus were provided for the *Humbertium* species *H. ravenalae* (von Graff, 1899) and *H. Proserpina* (Humbert & Claparède, 1862). Nevertheless, for the purpose of the current discussion, additional examples of copulatory apparatus are provided for *H. kelleri* (von Graff, 1899), *H. umbrinum* (Geba, 1909), *H. dodabettiae* (De Beauchamp, 1930), and *H. woodworthi* (von Graff, 1899). In the new genus *Humbertium* the male copulatory organ has essentially those features found in the genus *Bipalium*: large rounded muscular bulbous, cone-shaped penis papilla and well-developed penis sheath. The female organ is vertical with the vagina opening into the common antrum. However, in *Humbertium* the ovum vitelline ducts approach from the anterior, turn dorsally near the gonopore, and enter the female organ from an anterior-dorsal aspect (Robert E. Ogren and Ronald Sluys). In this region, First time record of Figure 2. *Humbertium proserpina* species from five falls in Courtallam, Tenkasi district, South Tamil Nadu, India.

The report is incomplete as there is no morphological description or biometric data of the concerned species. This report provides basic data for the classification of land planarians. We suggest further investigation and survey in this region to preserve important faunal diversity.

## CONCLUSION

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