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New record of *Octolasion cyaneum* in Sikkim, India

The new record of *Octolasion cyaneum* in the Sikkim Himalaya reported from the study area located at 27.275 N; 88.489 E, Thangsing, Fambonglho Buffer zone, East Sikkim, India. The Fambonglho Wildlife Sanctuary is a dedicated site for the conservation of wildlife in Sikkim whereon the light blue-grey specimen of earthworms found and had cylindrical body, length 65–200 mm, diameter 5–8 mm, segments 140–158, clitellum 29–34 segments, and colour light blue-grey. Several researches were undertaken on the earthworms across the world (Michaelsen 1909) but a few investigations of the earthworm survey were conducted in Sikkim considering availabilities and their life cycles relating to the microclimate, soil ecology, and forest health. Nevertheless, there were reports of earthworm from Darjeeling and Sikkim Himalaya (Julka & Halder 1977; Soota & Halder 1981; Halder 2003).

Besides, some reports were published from the other parts of the world on the terrestrial

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oligochaeta and the tropical earthworm of temperate grassland (Cernosvitov 1941) as well as some researchers reported from similar climatic conditions like Sikkim (Paliwal 2013). Considering all the contributions, it is felt that the documentation of earthworm of Sikkim is necessary.

In addition, Julka et al. (2009) reported the earthworm diversity of India having 418 species belonging to 70 genera under nine families. In recent past, Paliwal (2013) reported the earthworm diversity of Darjeeling District where it represented 47 species under six families exhibiting 11% of national earthworm diversity.

Earlier record in India: *Octolasion cyaneum*. Distribution: West Bengal: Near D.I. Fund Rest House Jorpokri (Julka 1975), 1 km east of Jorpokri (Julka 1975). Jammu & Kashmir (Najar & Khan 2011); Uttarakhand (Rajwar et al. 2018); Himachal Pradesh; Tamil Nadu: Nilgiris District – Udagamandalam (Ootacamund) (Kathireswari et al. 2005). Other parts of the world: Europe, North America, South America, Australia.

New Record in Sikkim: *Octolasion cyaneum* Savigny 1826, Thangsing, [27.275 N; 88.489 E], Thangsing, Fambonglho buffer zone and its vicinity, east Sikkim; collection date: 13.vi.2013; elevation: 1,655 m; coll. D.K. Pradhan.

The protologues of the newly record species in Sikkim are as under:-*Octolasion cyaneum*, 1826 Enterioncyaneum Savigny, Mem. Acad. Sci. Inst. Fr., 5 : 181 ; 1972 *Octolasium cyaneum* + *O. cyaneum* var. *armoricum* : Bouché, Inst. Nat. Rech. Agron., 260; 1991 *Octolasion cyaneum*: Mršić, Acad. Sci. Art. Slov. (Hist. Nat.), 31: 227; 2003; *Octolasion cyaneum*: Csuzdi & Zicsi, Pedozool. Hung., 1: 193; *Octolasion cyaneum*: Šapkarev 1989: 48; Šapkarev 2002: 305; Family Lumbricidae.

Noteworthy point is that *Octolasion cyaneum* (Savigny, 1826) was in existence in the rich biome at the buffer zone of Fambonglho having considerable amount of humic acid and fulvic acid. The role of their existence in the nature is yet to be unfolded and deserves more researches.

The newly recorded species, *Octolasion cyaneum*, in Sikkim was found in the vegetation matrix predominantly covered with *Rhododendron arboretum* Sm., *Alnus nepalensis* D.Don., *Evodia farxinifolia* Hook. F, *Engelhardtia* Lesch ex Blume, *Mentha spicata* L., *Arundinaria lamellos* Munro., *Walsura tubulata* Hiern., *Quercus fenestrate* Roxb., *Quercus spicata* Smith, *Quercus lamellos* Smith, *Quercus glauca* Thunb. *Semecarpus anacardium* Linn, *Senecio scandens* Wall and *Rhus griffithii* Hook. F and few more. In addition to this, the shady south facing hills of the sub-temperate region having moist

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and rocky places of forest areas was found suitable for its habitat. Most importantly, the soil of the location was covered with leaf litters and there was no report of any adverse impact of *Octolasion cyaneum* on the vegetation of Sikkim. Having said that, *Octolasion cyaneum* warrants more researches on the impact as well as biological relationship in the Sikkim Himalaya.

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