

Research Article

REPORT OF *DRYOCALAMUS NYMPHA* (DAUDIN, 1803) FROM PONDICHERRY UNIVERSITY CAMPUS, PUDUCHERRY AND CONSERVATION

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ABSTRACT

Dryocalamus nympha commonly called as common bridal snake, are belonging to colubridae family, it was observed in under bark and root of *Tectona grandis* and *Acacia auriculiformis* during moon soon season at central instrumentation facility building in Pondicherry University campus which is surrounded by lush vegetation. The species is uncommon in the region, according to IUCN, the *D. nympha* is listed under not evaluated category (NE), which is not reported by earlier studies in this region. In this study confirmed that *D. calamus* is the first report from Puducherry region. Hence, the authors exhibit the protection, maintenance, dynamics and the conservation aspect of *D. nympha* in the lights of prevent for extinct status due to anthropogenic influence.

Keywords: *Dryocalamus nympha*, Pondicherry University, Anthropogenic pressure, Conservation, South India.

INTRODUCTION

Dryocalamus nympha commonly called as common bridal snake, are belonging to colubridae family. Global distribution of *D. nympha* was recorded in Sri Lanka, Myanmar, Thailand, Cambodia, Vietnam, Laos and Burma. In India, this snake has distributed Andhra Pradesh, Orissa, and specifically Theni, Mayiladuthurai, Rameswaram and Kalpakkam nuclear campus of Tamil Nadu region (Boulenger, 1890; Smith, 1943; Ganesh, 2007; Ravichandran and Manju, 2010; Karunarathna and Amarasinghe, 2011; Pyron *et al.*, 2013; Ramesh *et al.*, 2013; Subramanian and Sathishkumar, 2013; Uetz and Hosek, 2013). This species has different vernacular names i.e., common bridal snake, vellore bridal snake, Vellethalayan, Geta Karawala/Radanakaya and it is originated from vertebrate (Smith, 1943; Radhakrishnan 1997; Murthy and Ravichandran 1998; Ruchira, 2004). Generally, it was found mainly in dryer plains, wood land and grassland

covered foot hills and feeds mostly lizards than frogs and small animals.

Pondicherry University covered 780 acres harbors of total land mass, which account for rich tropical floral (537 species) and faunal diversity (197 species) located in coromandal coast of India (Parthasarathy *et al.*, 2010, Priya Davidar *et al.*, 2010). Mean annual rainfall 1300 mm, dry season January to June, the summer periods reported in too, temperature in maximum 23.9° C in January and minimum 20.9° C. The land covered by red ferralic, lateritic sandy and heavily drained. Since quarter century, our university landscape has been modified due to building, road, lawn and ornamental development (Parthasarathy *et al.*, 2010). Further, the author aimed to report the *D. nympha* in Pondicherry region.

Faunal Systematic Hierarchies

Kindom : Animalia
Class : Reptilia
Order : Squamata
Suborder : Serpentes

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Family : Colubridae
Genus & Species : *Dryocalamus nympha*
(Karunaratna *et. al.*, 2011)
Synonym : *Coluber nympha* (Daudin
1803)

-white headed/
Geta Karawala/Radanakaya –
Sinhala (Ganesh, 2007;
Ruchira, 2004).

Vernacular Name

English : Common bridal snake,
Vellore Bridal snake

Tamil : Churutta/ Vellethalayan

MATERIALS AND METHOD

Study Site

Pondicherry University is situated along the coromandal coast of India, and located between 12°097' N 79°51.33' E. (Figure 1).

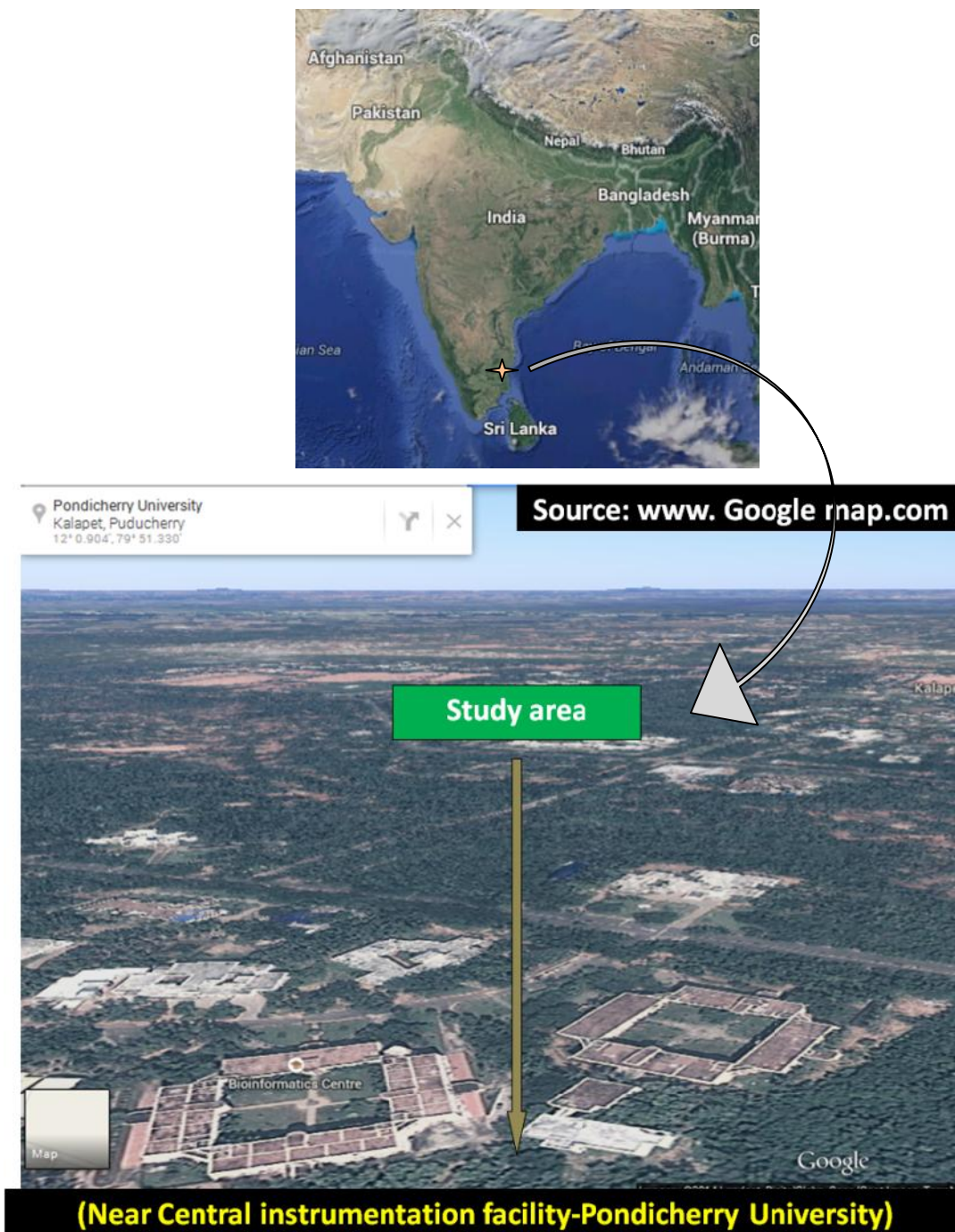


Figure 1. Study area map of *D. nympha* located in Pondicherry University, India.

Field Observations and Identification

Live snake was examined by standard method (Russell, 1796; Daudin, 1803). This snake identification was done with Ganesh *et al.*, (2009) scale counts with the help of magnifying hand lens and values taken in millimeter by standard method (Daudin, 1803; Merrem 1820; Boulenger, 1893; Ganesh, 2007; Sharma, 2004; Wrobel 2004). Live part of snake photographs have been taken from canon Sonny DSC-W270 in natural environment. Nomenclatural discussions strictly followed in the 1st edition of the Elsevier's Dictionary of Reptiles (Ganesh and Chandramouli, 2011).

RESULTS

D. nympha was observed in under bark and root of *Tectona grandis* and *Acacia auriculiformis* during moon soon season at central instrumentation facility building in Pondicherry University campus which is surrounded by lush vegetation (Figure 2). According to IUCN, *D. nympha* are uncommon in this region, are listed under not evaluated category (NE), and it is protected by wild life protection act under schedule IV, which is not reported by earlier studies. Hence, this study is confirmed that *D. nympha* is first reported from Puducherry region.



Figure 2. *Dryocalamus nympha* in Pondicherry university campus, India

Salient features: In the present study, *D. nympha* has dark brown color with series of irregular white stripes, creamy yellow in ventral area, large eyes with vertical pupils, 235 mm length in size long tail, rounded snout, narrow tip, oval shaped and dorso-ventrally flat head that broad and depressed in later, non venomous lifestyle. The body is slender, cylindrical and uniform girth.

Scalation: This snake specimen exhibits 13 rows of scales with smooth mid body, 243 ventral scales, vertical bars fall over 3 scales with black

spot, single loreal and 75 subcaudal that confirmed the identity of *D. nympha*.

Ecological Behavior: This species is oviparous, terrestrial and above the trees by climbing around the Pondicherry university campus. This snake takes prey from skinks, frogs, geckos, small reptile eggs and lizards for their diet, so it plays a vital role to maintain the ecological food chain and food web. Day time visible an under the dry leaves and human habitations, during anthropogenic pressure may twists knots itself and no attack.

DISCUSSIONS

The habitat alteration and landscape degradation leads to quantitative and potential reduction of reptile species from conserved region (Tamil Nadu Government Gazette 2009; Parthasarathy *et al.*, 2010; Subramanian and Sathishkumar, 2013). The longstanding issues of intensive developmental activities, new establishments within Pondicherry university campus leads to species loss and reducing natural vegetation leads to declining of reptiles species in Puducherry region. For maintenance of fundamental ecosystem function could be require larger patches of tropical forest for conserve populations of sensitive species (Laurance, 2005). According Pattanaik *et al.*, (2009), conservation proposal are well documented in India (Orissa) for save the biodiversity. In contrast, our studies focused to save to this species biodiversity based on literature cited above in terms of protection, maintenance and dynamics for conservation aspect in Pondicherry University campus.

CONFLICT OF INTERESTS

The authors declare that there are no conflicts of interests associated with this article.

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REFERENCES

- Boulenger G.A., 1890. The Fauna of British India, Including Ceylon and Burma. *Reptilia and Batrachia.*, Vol. 1 (Ed. J. Stephenson). Taylor and Francis, London, pp: 541.
- Boulenger G.A., 1893. Catalogue of the snakes in the British Museum. Natural History, Vol. I. Taylor and Francis, London, pp. 448.
- Daudin, F.M., 1803. Histoire Naturelle Generale et Particuliere des Reptiles. Vol. 6. F. Dufart, Paris, pp. 244.
- Ganesh, S.R., 2007. Record of common Bridal Snake *Dryocalamus nympha* (Daudin, 1803) in Mayiladuthurai area of Tamil Nadu. *Cobra*, 1 (3): 10-11.
- Ganesh, S.R., Asokan, S. and Kannan, P., 2009. Record of *Oligodon travancoricus* Beddome, 1877 (Serpentes: Colubridae) from Grizzled squirrel sanctuary, Western Ghats, Tamil Nadu, India. *Herpetol. Bull.*, 109: 25-28.
- Ganesh, S.R. and Chandramouli, S.R., 2011. On the nomenclature and taxonomy of the South Indian colubrid, snake *Ahaetulla perroteti* (Dumeril, Bibron) and *Dumeril*, 1854. *Herpetol. Bull.*, 117: 19-23.
- Karunarathna, D.M.S.S. and Amarasinghe, A.A.T., 2011. A Preliminary survey of the reptile fauna in nilgala forest and its vicinity, Monaragala District, Sri Lanka. *Taprobanica.*, 3 (02): 69-76.
- Laurance, W.F., 2005. When bigger is better: the need for Amazonian megareserves. *Trends Ecol. Evol.*, 20: 645-648.
- Merrem, B., 1820. Versuch eines Systems der Amphibien I (Tentamen Systematis Amphibiorum). J. C. Kriegeri, Marburg, pp: 191.
- Murthy, T.S.N. and Ravichandran, M.S., 1998. Reptilia. In: Faunal Diversity in India, Alfred, J. R. B., Das, A. K. and Sanyal, A.K. In: Faunal Diversity in India, Alfred, J.R.B., Das, AK. and Sanyal, A.K. (Eds.). ENVIS Centre, *Zool. Surv. India*, Calcutta, pp. 495.
- Parthasarathy, N., Arul Pragasam, L., Muthuperumal, C., Anbarsan, M., 2010. Flora of Pondicherry University Campus, Pondicherry University, India, Vol.I. (Ed. N. Parthasarathy), p: 2-5.
- Pattanaik, Chiranjibi, Sudhakar Reddy, 2009. "Conservation proposal to save the biodiversity of Niyamgiri hill range, Orissa". www.docstoc.com/docs/4242193/Conservation-proposal-to-save-the-biodiversity-of-Niyamgiri-hill.
- Priya Davidar, Utpal Smart, Geetha Nayak K., Ravichandra Mondreti, 2010. Fauna of Pondicherry University Campus. Pondicherry University, India, p. 4-5.
- Pyron, R.A., Kandambi, H.K., Hendry, C.R., Pushpamal, V., Burbrink, F.T., Somaweera, R., 2013. Genus-level phylogeny of snakes reveals the origins of species richness in Sri Lanka. *Mol. Phylogenet. Evol.*, 66(3): 969-78.

- Radhakrishnan, C., 1997. The Natural Resources of Kerala. Vol. 1 (Eds. W.W.F. India. In: Thampi, K.B., C.M. Nayar and C.S. Nair.). Kerala Office, Thiruvananthapuram Reptiles, p. 507-517.
- Ramesh, T.K., Hussain, J., Satpathy, K.K., Selvanayagam, M., 2013. Community composition and distribution of herpetofauna at Kalpakkam Nuclear campus, Southern India. *Herpetol. Notes*, 6: 343-351.
- Ravichandran, B. and Manju, S., 2010. Snakes of Rameshwaram. *Reptile. Rap.*, (9): 2-4.
- Ruchira, S., 2004. Guest Article Sri Lankan Colubrid Snakes, Vol. 6 (03-04). Sri Lanka Naturalist., Sri Lanka, pp: 33.
- Russell, P. 1796. An Account of Indian Serpents, Collected on the Coast of Coromandel; Containing Descriptions and Drawings of Each Species, Together with Experiments and Remarks on Their Several Poisons. George Nicol, London, Vol.8, p.1-1505.
- Sharma, R., 2004. Handbook Indian Snakes. Akhil Books., New Delhi, pp. 292.
- Smith, M.A., 1943. The Fauna of British India, Ceylon and Burma, Including the Whole of the Indo-Chinese Sub-Region. Reptilia and Amphibia. Vol. III. (Serpentes). Taylor and Francis., London, pp. 583.
- Subramanian, B. and Sathishkumar, N., 2013. Status of reptiles in Meghamalai and its environs, Western Ghats, Tamil Nadu, India. *J. Threat. Taxa.*, 5(15): 4953-4961.
- Tamil Nadu Government Gazatte, 2009. Declaration of Meghamalai Wildlife Sanctuary. Regd. No. TN/CCN/467/2009-11, p. 322-325.
- Uetz, P. and Hosek, J., 2013. Tigr Reptile Database (version Oct 2007). In: Species 2000 and ITIS Catalogue of Life, 11th March 2013 (Roskov Y., Kunze T., Paglinawan L., Orrell T., Nicolson D., Culham A., Bailly N., Kirk P., Bourgoin T., Baillargeon G., Hernandez F., De Wever A., eds). Digital resource at www.catalogueoflife.org/col/. Species 2000: Reading, UK.
- Wrobel, M., 2004. Elsevier's Dictionary Of Reptiles (1st ed). Elsevier Publication. p. 174.