

Scientific Note

New record of andromorphic *Urothemis signata* Rambur (Odonata: Libellulidae) from India

Nuevo registro del odonato andromórfico *Urothemis signata* Rambur (Odonata: Libellulidae) de India

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Abstract. First case of an andromorphic female of *Urothemis signata* from eastern India is presented. Detail comparisons of the andromorphic female with mature male and female of this species are given.

Key words: Anisoptera, andromorphs, Zygoptera.

Resumen. Primer caso de una hembra andromórfica de *Urothemis signata* para el este de la India. Se proporcionan comparaciones detalladas de la hembra andromórfica con machos y hembras maduras de esta especie.

Palabras clave: Anisoptera, andromórficos, Zygoptera.

Urothemis signata Rambur, 1842 is a commonly found Libellulid in Oriental and Australian region (Dow 2010). Usually, the adults of this dragonfly exhibit sexual dimorphism (Fraser 1936). Mature males of this species are striking red with reddish face, thorax and abdomen, while mature females are yellowish (Fraser 1936; De Fonseka 2000).

Male mimic females or andromorphs are commonly found in Zygoptera. Hybridization and coloration in females further complicate identifications based on their morphological features (Márquez-Rodríguez and Vega-Maqueda 2016). Furthermore it is estimated that andromorphs are found in 54% genera of European Zygoptera (Cordero and Andres 1996). Andromorph females are commonly found in Zygoptera where it represents true polychromatism (Corbet 1999). However, andromorphs are very rarely reported in Libellulid Anisoptera. In the Indian region, till date only six reports are available concerning Andromorphic females of *Neurothemis tullia tullia* (Drury, 1773) and one report of *Neurothemis intermedia intermedia* (Rambur, 1842) from north-eastern and central India (Lahiri 1979; Kumar 1988; Mitra 1991; Prasad *et al.* 2000; Emiliyamma 2009; Andrew 2013).

In spite of the large distribution of the species, only three photographic records of Andromorphic female of *U. signata* are available from Gujrat, Maharashtra and Kerala of Southwestern India (Anonymous 2019). No records heretofore have been available from Eastern India. We report a single andromorphic female of *U. signata* (Fig. 1), that was observed on 26-vi-2019, at a small water pool of Bara Solemanpur village, PurbaMedinipur District, West Bengal, India (21.6723° N, 87.5758° E, 7 m a.s.l.). The water pool was situated

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amidst the agricultural land and was fully covered by aquatic vegetation. At the same time a specimen of *Orthetrum sabina* (Drury, 1770) and other of *Ictinogomphus rapax* (Rambur, 1842) were observed. Photographs were taken with the help of Nikon P900 Camera and later identified with the help of Fraser (1936). Details on the comparisons of andromorphic female with mature male and female are given in Table 1.

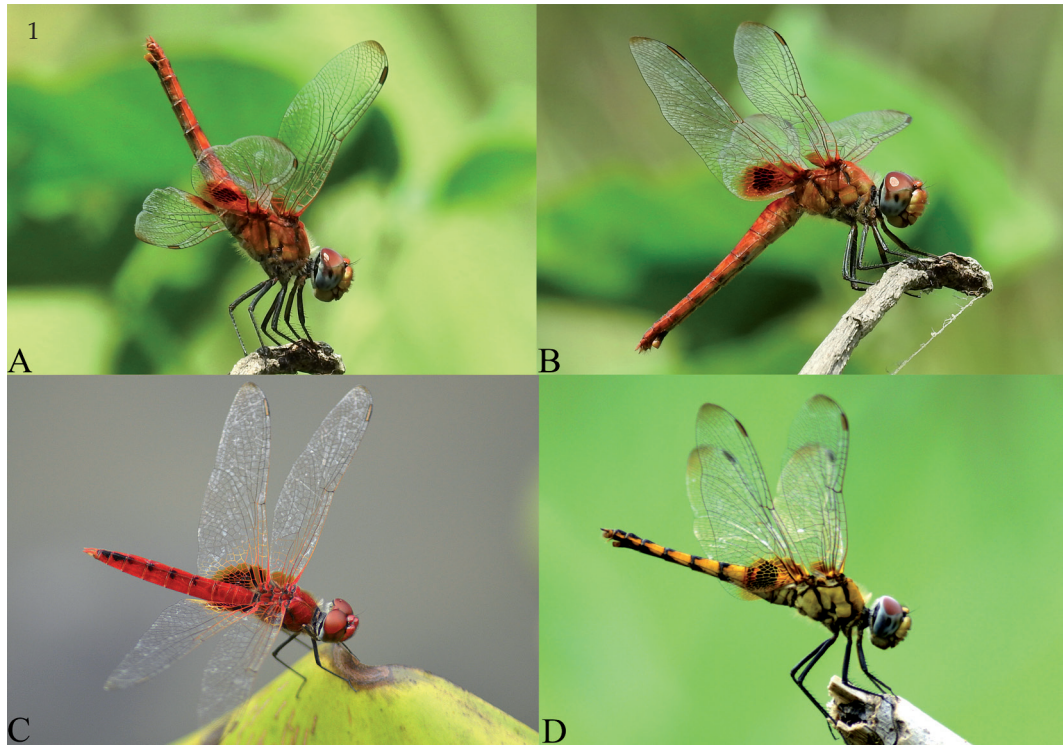


Figure 1. *Urothemis signata* Rambur, 1842. A-B. Andromorphic female. C. Mature male. D. Mature female (Photographs- Arajush Payra).

Literature Cited

- Andrew, R.J. (2013)** Andromorphic female of the dragonfly *Neurothemis tullia tullia* (Drury) (Odonata: Libellulidae), central India. *Journal of Threatened Taxa*, 5(1): 3571-3573. doi:10.11609/JoTT.o3143.155
- Anonymous (2019)** *Urothemis signata* Rambur, 1842 – Greater Crimson Glider. In Joshi, S., P. Dawn, P. Roy, and K. Kunte (eds.). *Odonata of India*, v. 1.48. Indian Foundation for Butterflies.
- Corbet, P.S. (1999)** *Dragonfly Behaviour and Ecology of Odonata*. Harley Books, Colchester, England, 829 pp.
- Cordero, A.R. and Andres, J.A. (1996)** Colour polymorphism in Odonates: Females that mimic males? *Journal of the British Dragonfly Society*, 12: 50-60.
- De Fonseka, T. (2000)** *The dragonflies of Sri Lanka*. Wildlife Heritage Trust, Colombo, 303 pp.
- Dow, R.A. (2010)** *Urothemis signata*. The IUCN Red List of Threatened Species 2010: e.T165562A6063342. <http://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T165562A6063342.en>
- Emiliyamma, K.G. (2009)** Gynandromorphism in *Neurothemis tullia tullia* (Drury) and *Rhinocypha bisignata* (Selys) (Odonata: Insecta) from Kerala. *Records of the Zoological Survey of India*, 109: 73-75.

- Fraser, F.C. (1936)** The fauna of British India including Ceylon and Burma, Odonata—Vol III. Taylor and Francis Ltd., London, 461pp.
- Kumar, A. (1988)** On the andromorphic female of *Neurothemis t. tullia* (Dru.) (Anisoptera: Libellulidae). *Notule Odonatologicae*, 3: 12-16.
- Lahiri, A.R. (1979)** Odonata (Insecta) from different states of north east India. *Oriental Insects*, 13: 119-132.
- Márquez-Rodríguez, J. and Vega-Maqueda, M.A. (2016)** Rarezas odonatólogicas en un curso afectado por la antropización actual (Insecta: Odonata). *Arquivos Entomológicos*, 16: 285-292.
- Mitra, T.R. (1991)** Another record of an andromorphic female of *Neurothemis t. tullia* (Dru.) (Anisoptera: Libellulidae). *Notule Odonatologicae*, 3: 133-134.
- Prasad, M., Kulkarni, P.P. and Talmale, S.S. (2000)** New record of andromorphic females in two species of *Neurothemis* dragonflies (Odonata: Libellulidae) from central India. *Bionotes*, 2: 54.

Table 1. Comparison of the colour pattern of mature male and female with andromorphic female

<i>Urothemis signata</i>	Male	Female	Andromorph female
Eyes	Dark red above, reddish brown laterally, and lilaceous underneath	Light red above, laterally and underneath lilaceous	Light red above, laterally light brown and underneath lilaceous
Frons	Red	Yellow	Yellow laterally and middle portion with reddish tinge
Wings	Base of the forewing and surrounding area of dark amber spot at the base of hind wing with reddish tint. No brown tipped on apices of wing	With golden yellow tint. Apices of the wing tipped with brown	With reddish tint. Apices of the wing tipped with brown
Thorax (dorsal and lateral views)	Red	Yellow	Brick red
Abdomen	S1- S10 blood red. Posterior end each segment, from S4 to S7 with black spot dorsally. Dorsally S8 and S9 with black streak	Abdomen olivaceous yellow to dull yellow. S3 to S7 with black subdorsal apical spot, and dorsally S8 to S9 with black streak as male	S1-S10 brick red with yellowish tint dorsally. Posterior end each segment, from S4 to S7 with black dorsal spot. And dorsally S8-S9 with black streak as male
Caudal appendages	Cerci pale red. Paraproct yellowish	Cerci yellow at base and black apex. Ovipositor yellow	Cerci reddish. yellowish ovipositor

