

6. ON A RECORD OF *AMPHILOPHUS TRIMACULATUM* (GÜNTHER) (TELEOSTEI : PERCIFORMES: CICHLIDAE) IN THE NATURAL WATERS OF TAMIL NADU, INDIA

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In India, most species of native freshwater fish have evolved under riparian or shallow marsh-like conditions as there have been very few natural tropical lakes. As a result, the Indian fish fauna lacks the phenomenal diversity of lentic (stagnant water) fishes, especially of cichlids, that Africa and South America boast of (Lowe-McConnell 1987). The three native cichlids (chromides) are *Etilapia maculatus* – the smallest and most widespread of chromides occurring locally in streams, rivers and marshes, *Etilapia suratensis* – a brackish water-estuarine species and *Etilapia canarensis* – an endemic to the streams of the Western Ghats. The last is a rare chromide and very little published information exists of its habits (Menon *et al.* 1993).

Until now only one genus of African Tilapia (*Oreochromis*) was known amongst the introduced fish in India. *Oreochromis mossambica*, a cichlid, which was first introduced in 1952 as a food fish has practically colonized all freshwater and brackish water habitats in India (Daniels 2002).

Recently, a cichlid of the genus *Amphilophus* belonging to a diverse group of South American cichlids formerly classified as *Cichlasoma* (Kullander, 1983) has been recorded for the first time through collections from Rettai Eri, a wetland in Chennai. The specimens collected are very similar to *Amphilophus trimaculatum*, popularly known as the 'trimac

cichlid' or 'red-eye cichlid'. The native range of *A. trimaculatum* is Laguna Coyuca, Mexico to the Río Lempa, El Salvador (Nico 2009). Non-native distribution has also been recorded from Florida (Shafland 1976). The individuals collected in Chennai differ slightly in having neon green spots on the base of each scale (Fig. 1). These fish are traded as aquarium pets under the trade name 'Flowerhorn', keenly sought by the practitioners of Feng-Shui.

The Flowerhorn cichlid is believed to be a product of hybridisation between different species of South American cichlids classified under the genera *Cichlasoma* and *Amphilophus*, or it is also plausible that the trimac cichlid is injected with hormones or selectively bred to enhance its colour and body shape. The neon green scales in the specimens from Rettai Eri could be attributed to either of the above. These specimens also have bright red eyes and a spot on the nuchal region characteristic of *A. trimaculatum*; a characteristic also clearly noticeable in juvenile specimens (Fig. 2).

The Flowerhorn is likely to emerge as a greater invasive than the Tilapia. The Tilapia is an omnivore but the Flowerhorn is a predacious fish that eats smaller fish. Under aquarium conditions these fishes are highly predacious and aggressive and have been observed to devour any small fish introduced into the aquarium. *A. trimaculatum* is known to grow to more than 36 cm in length (Nico 2009), and even a



Fig. 1: Adult Flowerhorn collected from Rettai Eri, Chennai



Fig. 2: Juvenile Flowerhorn collected from Rettai Eri, Chennai

well-grown Tilapia may not stand a chance against this marauder.

The emergence of Flowerhorn in natural waters is a consequence of unregulated aquarium trade in the country. This fish may have escaped during floods from the ornamental fish farms around Rettai Eri in Chennai, where breeding of ornamental fish is unregulated. Apart from developing appropriate norms to oversee aquarium fish trade, we need to monitor issues such as accidental or deliberate release of

exotic fish species into our waters. If these issues continue to remain unnoticed, our waters will soon emerge as breeding grounds of invasive fish that will eventually reduce the native freshwater fish diversity.

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7. *IXORA CHINENSIS* LAM.: A NEW HOST PLANT FOR COMMON SILVERLINE *SPINDASIS VULCANUS* FABRICIUS, (LEPIDOPTERA: LYCAENIDAE) FROM WEST BENGAL

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Common Silverline *Spindasis vulcanus* Fabricius (Family Lycaenidae) is one of the most widespread and common butterfly of the Indian region. The butterfly is omnipresent ranging from sea level to the crest-lines of mountain ranges, and from scrub to secondary evergreen forests, but it occurs primarily in open areas (Kunte 2000). The adult butterfly feeds on nectar of a wide variety of plants. The recorded larval food plants are *Allophylus cobbe* (Sapindaceae), *Cadaba fruticosa* (Capparaceae), *Canthium coromandelicum* (Rubiaceae), *Clerodendrum indicum* (Verbenaceae), *Zizyphus mauritiana* and *Zizyphus rugosa* (Rhamnaceae) (Wynter-Blyth 1957; Kehimkar 2008).

A new host plant has been recorded by the authors for Common Silverline in the campus of Indian Botanic Garden. The Garden, previously known as the Royal Botanic Garden, is located on the western bank of the Hooghly river in Howrah, opposite Kolkata city in West Bengal. Several caterpillars of the butterfly were found on the mature leaves of Chinese *Ixora*

(Torch Tree *Ixora chinensis* Lam., Family Rubiaceae). However, unlike the previous reports of the peculiar style of feeding of the caterpillar from the lower surface of the leaves of their host plants, leaving the upper cuticle intact and shrivelled (Kunte 2000), a few of them in the present case have been found to eat from the upper surface of *Ixora chinensis* leaves. All the larvae were attended by ants.

Ixora chinensis is a dwarf species of tropical evergreen plants of the genus *Ixora* (Family Rubiaceae), attaining a height of 1.5 m. A native of China, distribution of *I. chinensis* now extends from southern China to India. At present a large number of cultivars of *Ixora chinensis* are being cultivated throughout the tropics for their ornamental value characterized by long lasting flowers and attractive shiny leaves (Chakraberty and Jain 1984; Bose *et al.* 1991). The species serving as the host plant for Common Silverline in the present study area is a small erect shrub, attaining a height of 0.97 m with scarlet flowers.



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