The Phoenix Damselfly (*Pseudolestes mirabilis*) of Hainan Island, China

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In a previous issue of this newsletter (*AGRION* 10(1)), I wrote a short account of a field trip to Hainan – the largest island in the People’s Republic of China, situated south of Guangdong Province and east of northern Vietnam in the South China Sea. This account included a very brief description of the extraordinary Hainan endemic damselfly, *Pseudolestes mirabilis*. This species, which is common on small shady hill streams across the island, is usually considered the sole member of the family Pseudolestidae, although often placed within the rather catholic family Megapodagrionidae. It has reduced hindwings, which are gold and black on the upper surface and silvery white and black on the under surface. The silvery white colour is derived from small waxy scales – a highly unusual feature. Another peculiarity of this species is the characteristic ‘arrow-head’ perching posture, in which both pairs of wings are held angled backwards at an angle of approximately 135º to the thorax (see the photograph provided in Reels, 2006 or the various photographs posted on the Asia Dragonfly website by Keith Wilson). Perhaps the most remarkable feature of this unusual odonate, however, is the agonistic male territorial behaviour. In April this year I visited Wuzhishan, the highest mountain in Hainan (1,867 m). On 19 April, at a boulder stream at 700 m, I attempted to photograph this fascinating behaviour, which I describe below (Photos 1-3).

Two males of *P. mirabilis* were observed for 45 minutes, from 1700h onwards, repeatedly hovering in prolonged aerial face-offs, during which they would drift backwards, forwards, sideways or upwards over a 10m stretch of stream, for up to 4 minutes continuously, before re-alighting on their favoured perches (which were on small overhanging branches, 1.5 m apart) for periods of up to two minutes. During the aerial face-offs, the two males stayed resolutely locked face to face, usually hovering about 0.1 to 0.2 m apart (Photo 1). The hindwings were normally held motionless, hanging down (Photos 2 and 3) but were occasionally flapped up and down by one or other male for a period of perhaps three seconds. This provided a striking white flag-waving display (not, however, an act of surrender!). After 45 minutes I was forced to break off from my observations by the arrival of an ovipositing *Macromia moorei*, but that is another story.

**What’s in a name?**

I am currently working on a simple field guide to the
odonates of Hainan, to be published by Kadoorie Farm & Botanic Garden (a Hong Kong-based conservation education charity) as part of a series of field guides to Hainan’s fauna and flora, aimed primarily at older schoolchildren in China. As part of this exercise, and as a means of enhancing the public recognition factor for these insects, I have been asked to provide English common names for the Hainan species. In the case of *Pseudolestes mirabilis*, I am proposing that ‘Phoenix’ be adopted as the English common name. The phoenix is of course familiar to westerners from ancient Egyptian theology and Christian mythology, as a brilliant gold-coloured bird that rises from the ashes of its own funeral pyre. The analogy with *P. mirabilis* males rising upwards on golden wings is obvious. More relevantly, however, ‘Chinese phoenix’ is the English name for fenghuang – a bird-like chimera from Chinese mythology, comprising elements of several different animals. This is an apt model for *P. mirabilis*, with its apparent bee-mimicry (see Wilson, undated), its scaled hindwings, and its hawkmoth-like resting wing posture. From the Yuan Dynasty onwards, the fenghuang symbolised the Empress, just as the dragon symbolised the Emperor (which, without wishing to strain the damselfly / dragonfly analogy too far, may also be considered apposite), and represented high virtue and grace. I can think of no better English name for this regal damselfly.

References


Photo 3. *P. mirabilis* male in agonistic flight, showing gold and black on hindwing upper surface, and silver scaly area on hindwing lower surface.

Photo 4. *P. mirabilis* – the Phoenix.