

PANTALA FLAVESCENS (FABRICIUS) IN KHUMBU HIMAL, NEPAL (ANISOPTERA: LIBELLULIDAE)

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Abstract – The observations in the Mt Everest region (alt. 2700-4000 m) are brought on record (May 2000), and the origin of the Khumbu individuals is discussed. *Crocothemis e. erythraea* (Brullé) is recorded from Phakding (alt. 2700 m a.s.l.).

Introduction and observations

Between 28th April and 6th May 2000 four friends and I visited Sagarmatha National Park in Khumbu Himal. In this part of the Himalaya lies Mt. Everest (Sagarmatha, Chomolungma, 8848 m a.s.l.) the highest mountain on earth. For a detailed description of the National Park see CHAUDHARY (1998). Our route went from the field airport in Phaphlu (2200 m a.s.l.) via Lukla (2860 m a.s.l.) and Namche Bazar (3440 m a.s.l.) to the Thyangboche monastery (3890 m a.s.l.). After the descent from Thyangboche we stayed in the Dudh-Khosi Valley (2400-2800 m a.s.l.) for a week. Most of the time the weather was warm (25°C) with sunshine but night temperatures fell below 10°C.

In this note I present some observations of *Pantala flavescens* and discuss them in relation to the records of migration by previous authors.

30-IV-2000 Ascent to Thyangboche. A dead specimen on the path at 3800 m a.s.l.

1-V-2000 Kumjung. At 4000 m a.s.l. some individuals were observed flying in a slow and directional manner down the valley through shrubby ground at a height of 2 to 4 m above the ground. Only single individuals were seen but constantly so for 2 hours. This apparent migration was underway upon our arrival and had not finished when we left the place. During these two hours we observed approximately 100 individuals.

1-V-2000 Above the field airport at Namche Bazar (3660 m a.s.l.). About two individuals per min. were observed. The specimens flew low over the ground and sometimes rested on scattered bushes of the otherwise bare ground.

2-V-2000 to 5-V-2000 DudhKhosi Valley (2400-2800

m a.s.l.). On each of the four days we saw specimens around midday. They were never in a swarm and continually flew down the valley. Individuals were seen above the river valley as well as above bordering fields on slope terraces in a height of 2 to 4 m above the ground. Here we also observed *Crocothemis e. erythraea* (Brullé) and a small unidentified little libellulid (near Phakding, 2700 m a.s.l.). The 2 species were not in the company of *P. flavescens*.

Five captured individuals of *P. flavescens* and also the dead individual were all teneral.

Discussion

P. flavescens is a circumequatorial migrant (AGUILAR et al., 1985; ASKEW, 1988; CORBET, 1999). In contrast to previously observed mass migrations in the Northern Hemisphere which are bound to weather fronts (ASAHINA, 1971; FRASER, 1936; KUMAR, 1984; CORBET, 1999; WOJTUSIAK, 1974) we did not observe swarms. The more than 1000 observed individuals all flew low above ground and during the warmest parts of the day, all down the southern slopes of the Himalaya. The one-directional flight by all specimens does, however, strongly suggest, that we indeed observed migrating individuals. The flight direction did not appear to be correlated to the monsoon winds starting in spring and blowing during the summer from the Gulf of Bengal (MARTENS, 1979). Both the origin as well as the destination of the migrating individuals remain unknown; we, however, strongly assume that these individuals had crossed the Himalaya. In the Himalaya, *P. flavescens* has previously been recorded from such high altitudes, between 3400 and 6300 m a.s.l. (JACKSON, 1955; ST. QUENTIN, 1970; VICK, 1989). In accordance with our observations these were also in the spring months of March (JACKSON, 1955) and May (ST. QUENTIN, 1970). The observed specimens may have originated from a generation which developed northwest or northeast of the Himalaya, e.g. in Central Asia or Japan

(BELYSHEV & HARITONOV, 1983, fig. 4). During the phase of sexual maturation they perhaps cross the high mountain ridges from North to South to start their reproductive period in the Terai region or the northern Indian lowlands at the beginning of the monsoon season (KUMAR, 1984). Likewise, GORODKOW (1961) observed *P. flavescens* in East Pamir at an altitude of 3700 to 5000 m a.s.l. flying in southerly direction which would imply both a similar flight direction and that as the migration took place in the form of a wide front.

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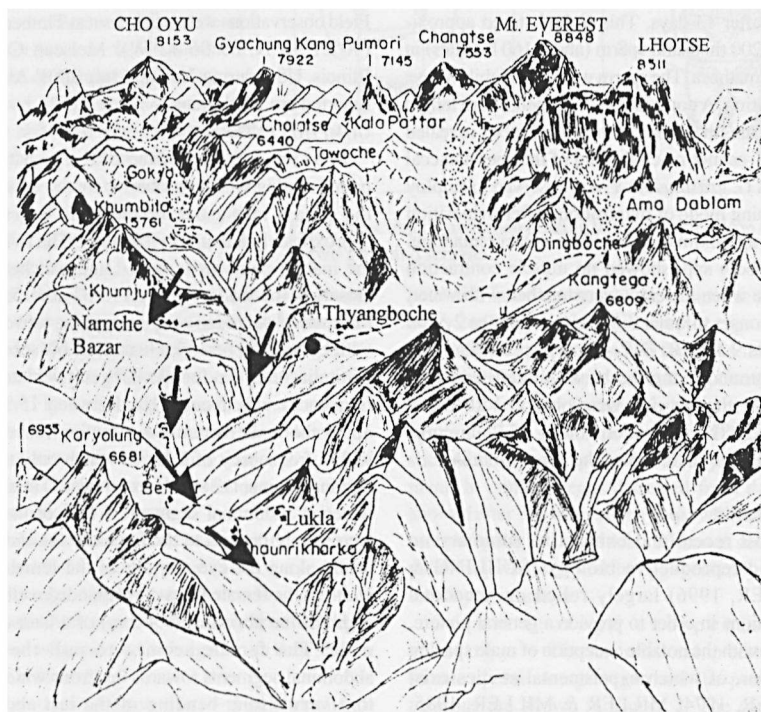


Fig. 1. Flight direction of *Pantala flavescens* in the Dudh Kosi Valley, May 2000.