

Additional note about androchrome females in *Crocothemis erythraea* (Brulle, 1832)

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DODATNA NOTICA O ANDROKROMNIH SAMIČKAH OPOLDANSKEGA ŠKRLATCA *CROCOTHEMIS ERYTHRAEA* (BRULLE, 1832) - Zbrani in predstavljeni so novi podatki o pojavljanju androkromnih samičk opoldanskega škrlatca. Iz priložnostnih opazovanj je opisano vedenje androkromnih samičk, dodana je tudi razprava o možni biološki vlogi te neobičajne obarvanosti.

In a small note (KOTARAC, 1996) bright red coloured females of *C. erythraea* were reported. Since then additional information on the subject has been collected and is presented here.

On 31-VII-1996 three red females were observed and two of them collected by the author at the amelioration channels S of the village Škofije near port of Koper at the Slovenian Littoral (UTM VL04, alt. 5m). All individuals were mature, but in no way old. The red colour was nearly as bright as in males. After acetone treatment it disappeared, however the dry androchrome females are much darker brown than the heterochrome ones from the same spot. Red female was spotted at same locality also by the participants of the Post-Symposium Trip of the XIV. International Symposium of Odonatology in the end of July 1997. Mr U. ČERVEK (Maribor, Slovenia; pers. comm.) reported sightings of red *C. erythraea* females at a gravel pit near Središče ob Dravi (NE Slovenia) in August 1996. Additionally Dr M. PAVESI (Milano, Italy; pers. comm.) provided information about red coloured females observed in SE Italy (Puglia, Gallipoli) and E Turkey (area of Diyarbakir). He stated, however, that in his opinion they were older individuals and that red coloration was a sign of maturation.

The same phenomenon was reported by KOČA (1925). The translation reads: »Young males yellow, as the females are, but at Oštro in Kraljevica [Northern Adriatic Coast of Croatia] at the two open water tanks (15-VII-1901; 31-VII-1902) some females were red as the males are.«

In July and August 1997 a good population of *C. erythraea* with red coloured females was discovered at Blato, 3 kilometers S of town Korčula on the island Korčula, S Croatia. The locality is a

small pond of about 150m² surface, surrounded by up to 3m wide wall of *Typha*. The population density of *C. erythraea* was very high: around 100 males were observed there each day between 10 a.m. and 2 p.m.. The establishment of territories completely failed, the males were just wildly flying around and briefly fighting, only occasionally resting. During the observation times the "normal", yellowish or brownish females were hardly spotted directly at the pond, majority of them resting and feeding in the scrub at the distance of 50meters or more from the pond. If one of them tried to oviposit it was seized by males even before reaching the pond at the inner side of the *Typha* wall. The majority of red coloured females were seen sitting on the outer side of the *Typha* wall. During the male peak activity time they remained there completely unmolested. Occasionally one of them tried to oviposit yet the tactics seemed to be a different one. It dipped the abdomen 1-3 times and then flew straight away followed by a number of males. Surprisingly it nearly always came out of the cluster alone and dipped its abdomen for the next time. During such runaways the red colour of the female was clearly of precedence towards yellowishbrown, since the female could actually hide between the males. While searching for the promising egg-laying place the red females were many times spotted by males, yet the males treated them as other males and did not try to copulate.

From a number of red female specimens taken the color difference could be clearly distinguished. It was orange with some yellow protruding in young ones, perhaps a slightly more pale red than in males in mature females, followed by a mixture between dark red and magenta in old females with broken wings and dust covered body. Some photographs of red females were taken with primitive equipment available. However, a good sample of males, normal females and red females fixed in 70% ethanol in separate containers is awaiting a serious researcher on the »first come - first served« basis.

It is obvious that androchromy is not rare in *C. erythraea*. It remains to be discovered what the reasons and consequences of this phenomenon might be.

References:

- KOČA, Đ., 1925. Prilog poznavanju naših Odonata. *Glasnik hrvatskoga prirodoslovnoga društva* 36(1-2): 81-86.
- KOTARAC, M., 1996. A note on the existence of androchrome females in *Crocothemis erythraea* (Brulle) (Anisoptera: Libellulidae). *Notul. odonatol.* 4(7): 123-124.