WINTER OVIPOSITION OF *SYMPETRUM STRIOLATUM* (CHARP.) IN CENTRAL ITALY (ANISOPTERA: LIBELLULIDAE)

Casteporziano, Roma, January 17, 2000, I watched a male *Sympetrum* sp. flying over a pond and the bush adjacent to it. Even though in one instance it perched on my hand, I was not able to catch and/ or identify it at the specific level.

Bosco di Foglino, Nettuno, Roma, January 25, 2001, I recorded some 3-5 *Sympetrum* flying over a flooded meadow. At about 12:30, one male took a female in tandem and raised its abdomen several times, as if doing attempts to copulate. Since the female did not respond, the pair perched on the grass of the bank, so I could approach them and quickly catch them by hand and put them into a paper envelope. The pair did not appear to be in good condition, since both individuals had the tips and the rear wing margins considerably damaged and the female also showed very small and numerous mud droplets all over the body and wings, as if she had survived a rainy period perching on low perches near a muddy ground; also, the body coloration of both dragonflies was dull and opaque. They made the impression of representing very old insects of the 2000 generation rather than precociously emerged and matured individuals of the 2001 generation. On the subsequent day, upon examining the pair under stereo microscope, I identified them as *S. striolatum*, and I have noticed several eggs still attached to the lamina vulvaris of the female and some more eggs in the envelope, meaning that the male had probably caught the female while she was ovipositing.

Generally in central Italy, the latest adult *Sympetrum* specimens are recorded not later than mid December (in Castelporziano, Roma, for *S. striolatum*, Dec. 6th, *in*: C. UTZERI, E. FALCHETTI & C. CONSIGLIO, 1977. *Fragm. entomol.* 13: 59-70). Even though this might be mainly due to the fact that in Europe odonatologists do not usually go collecting dragonflies as late as December or other winter months, I believe that these dates mark the approximate end of the *S.*

striolatum flying season in central Italy. On several occasions I visited Castelporziano and other central Italian biotopes during winter, but have never seen any Odonata flying after the first half of December. To my knowledge, these are the latest seasonal records of *S. striolatum* for Italy. A. PAINE (1992, *J. Br. Dragonfly Soc.* 8[1]: 14-18; 8[2]: 17-19; 1993, *ibidem* 9[2]: 51-52; 1994, *ibidem* 10[1]: 20--23) published several late activity records, generally not exceeding November, for British dragonflies, and P. TESTARD (1972, *Bull. Soc. ent. Fr.* 77: 118-122) recorded several *S. striolatum* pairs at Doñana, near the mouth of the Guadalquivir river, Spain, between December 13-18, 1971. On the other hand, Ferreras Romero (pers. comm.) got no information on dragonfly oviposition in January in Spain, so my records might be the latest even for Europe.

A. BISCHOF (1993, *Opusc. zool. flumin.* 114: 1-12) recorded oviposition in *S. striolatum* at the end of November over a frozen water surface in Switzerland, which suggests that the dragonfly can survive (for some time) at subzero temperatures. In central Italy, the 2000/2001 winter, at least up to the end of January, was very mild and no abruptly cold period marked the autumn-to-winter transition. The present record suggests, therefore, that at least at the central Italian latitudes, the yearly extinction of the *S. striolatum* adult population in late autumn is probably caused by long periods of bad weather, including drop of temperature, which preclude dragonfly activity and feeding. If ambient conditions keep relatively good and stable, dragonflies can probably go on with feeding and egg maturation, and perform normal reproductive behaviour, including mating and oviposition.

C. Utzeri, Dipartimento di Biologia Animale e dell'Uomo, Università di Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma, Italy; – e-mail: carlo.utzeri@uniroma1.it