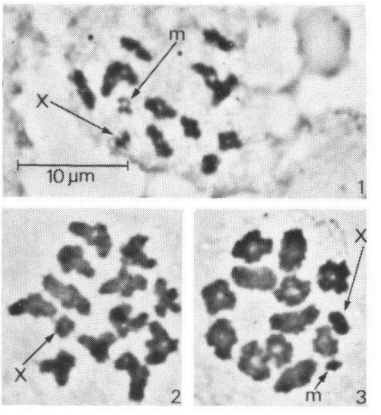
449-480). From his 1943 metaphase-I description (p. 13) and figure 2, and from his 1952 figures 1-2 and 13 (micrograph) it is apparent that the Swiss individual is distinct in having, in most metaphase-I figures, a considerably smaller X, which is often but little inferior in size to the relatively small *m*-bivalent. In Finnish material the latter is too large to be readily discerned from other bivalents at this stage. In view of a certain amount of structural variation (colour pattern) in individuals from Nordic and Alpine populations on one



Figs. 1-3. Primary spermatocyte metaphase complements of two 'alpine' anisopterans (Flumserberg, St. Gallen, Switzerland) (Feulgen squash, 1500 X): (1) Djak.; — (2-3) (Sel.): n = 13 set (fig. 2), n = 14 set (fig. 3). Note the bivalent structure of the *m*-element in the n = 14 complement.

THE KARYOTYPES OF *AESHNA SUBARCTICA ELISABETHAE* DJAK. AND *SOMATOCHLORA ALPESTRIS* (SEL.) FROM SWITZERLAND (ANISOPTERA: AESHNIDAE, CORDULIIDAE)

A. subarctica elisabethae: 1 ♂, Schwarzsee, Seebenalp, Flumserberg, St. Gallen, 1630 m; Sept. 15, 1980; 33 complements photographed. — n = 14, *m*. — (Fig. 1). — The chromosome morphology of Finnish material (Jyväskylä and Tvärminne) was reported by T. OKSALA (1943, *Ann. Acad. Sci. fenn.* (A) 4 (4): 1-54, 1 pl. excl.; — 1952, *Hereditas* 38:

hand, and those from the lowlands of northern Central Europe on the other, a systematic examination of the karyotypic variation throughout the subspecies range is likely to be rewarding. It would be likewise interesting to compare the chromosome morphology of *elisabethae* to that of the nearctic nominate form.

S. alpestris: 5 ♂, Großsee, Seebenalp, Flumserberg, St. Gallen, 1630 m; Sept. 15-21, 1980; 55 complements photographed. — n = 13; 13/14, *m*. — (Figs. 2-3). — Only in two individuals was the haploid chromosome

number invariably 13, while in the other three specimens the n = 14 complements prevailed. There is no *m* in the n = 13 karyotype and, at metaphase I, the X is the smallest of the set. A clearly structured *m*-bivalent occurs in the n = 14 complements; it seems to originate in fragmentation of one of the medium-sized pairs. The size of the other elements (bivalents) appears approximately identic in both complements. This is the first member of the genus (out of six studied; cf. B. KIAUTA, 1972, *Odonatologica* 1: 73-102) in which the chromosome number deviates from the n = 13 pattern. The possibility of the existence of a correlation between the peculiar biogeographic character of the species and its recombination potential (i.e. increased genetic flexibility of the genome) cannot be argued on the basis of this incidental evidence.

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