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○ *Utricularia subulata* L. の染色体数 (近藤勝彦) Katsuhiko KONDO: Chromosome number of *Utricularia subulata* L.

ジョージア州産の *Utricularia subulata* から染色体数 $n=15$ が得られた。それらの染色体は成熟分裂第一分裂中期ですべて 2 価を示した。基本数 $X=15$ はいままでにてタヌキモ属中に報告はない。

Utricularia subulata L. is one of the most widespread among the terrestrial species of *Utricularia*, occurring in Africa, North and South America, southern Europe, and southeastern Asia. The flowers of *U. subulata* may be either cleistogamous or chasmogamous. The lack of constancy in floral shape in *U. subulata* indicates some polymorphism of floral parts. The cleistogamous flower of *U. subulata* is much smaller and has a white corolla which never opens; in contrast, the chasmogamous flower is bigger and has a yellow corolla which usually opens. The sexual reproduction of chasmogamous flowers may be of the autogamous type. Barnhart (1913) placed *U. subulata* in the original treatment of his genus, *Setiscapella*. It occurred to me that the chromosome number of *U. subulata* might indicate

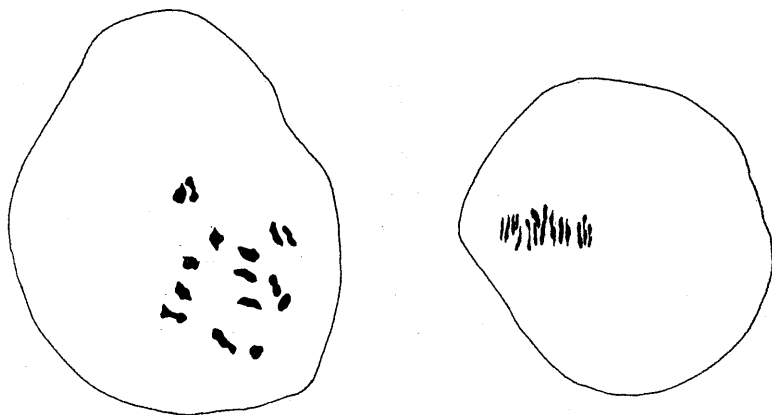


Fig. 1. Chromosomes in pollen mother-cells of *Utricularia subulata* L. (15 II), \times ca. 1450.

its degree of relationship to most of the other species of *Utricularia*. However, I found that the chromosome number for *U. subulata* was apparently unknown, and it is reported here for the first time.

In *Utricularia subulata*, fifteen bivalents at metaphase I of meiosis were clearly observed. The meiotic divisions in PMC's were very regular. The bivalents were normal and consisted of two elements of equal size. Each bivalent was ring-shaped, conjugated at both ends. This chromosome number is unusual for species of *Utricularia* in the New World, since the New World species thus far studied have a basic chromosome number of nine. Also, another heteroploid has been found in *U. biflora* Lam. ($n=14$) from North Carolina; This is a synonym of *U. gibba* subsp. *gibba* which is also a very widespread species, occurring in the New World, Africa, and Asia to Australia. Subramanyam and Kamble reported chromosome number for seven species of *Utricularia* in India that show heteroploidy, $X=6, 7, 8, 10$. This indicates that the Asiatic population of *Utricularia* may have many races with heteroploidy. Since both *U. subulata* and *U. gibba* are indigenous to Asia as well as the New World, both species may have had their origins among the Asiatic heteroploid species of the genus. Endemic species of the New World obviously should be a polyploid series, and cosmopolitan species of *Utricularia* may be a number of races of polyploid series.

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