

## Abstract

Nectaries of 31 taxa belonging to 4 subgenera of the genus *Fritillaria* are investigated by scanning electron and light microscopy. In most of the material investigated nectary cells were smaller and narrower, and less irregular in shape than those of the neighbouring tissue of the tepals. Species belonging to subgenus *Rhinopetalum* clearly differ from all other species. Their nectaries are deeply impressed, and the slit-like nectary orifice is bordered by two lobes, at least in the lower part densely hairy. In *F.gibbosa*, *F.karelinii* and *F.ariana*, the flowers are  $\pm$  zygomorphic as the nectary on the upper tepal is more deeply depressed than the others, and the nectary lobes are rather broad and fringed. In *F.stenantha* and *F.bucharica*, nectaries are equally impressed in all tepals and the nectary orifice is bordered by narrow, unfringed ridges. The unique structure of nectaries in all species of this subgenus supports its separation from *Fritillaria* into a separate genus (*Rhinopetalum* Fisch. ex Alexand). In the other subgenera, the nectaries are less impressed, often  $\pm$  flattish, and usually linear to lanceolate or ovate, except in subgenus *Petilium* where they are  $\pm$  circular. One complex in subgenus *Fritillaria* is markedly distinguished from the rest of the subgenus: in the *F.crassifolia* group, the nectaries consist of a long and linear raised ridge with a median furrow. *F.crassifolia* ssp. *Poluninii* is raised to specific level, *F.poluninii* (Rix) Bakhshi Khaniki & K.Persson, stat. nov. It is concluded that data on nectary morphology support the latest classification of the genus *Fritillaria* into subgenera and informal groups.