SUMMARY

Kostrakiewicz K. The state of selected populations of *Dianthus superbus* **and** *Gentiana pneumonanthe* **in Cracow (S Poland)**
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Gentian marsh and superb pink belong to rare and vulnerable species in Poland. They grow particularly in purple moor-grass meadow *Molinietum caeruleae*. Investigations were carried out during summer 2007 in patches in Kostrze and Opatkowice (SW part of the Cracow urban area, fig. 1, and 2). In populations of *Gentiana pneumonanthe* (aclonal species) as a basic demographic units were adopted genet, while in population of *Dianthus superbus* (clonal plant) – ramet cluster. The aims of study was to evaluate the abundance and spatial structure of populations, number and length of ramets in genet/ramet cluster as well as flower and capsules production.

All populations of *G. pneumonanthe* were characterized by low abundance. At the site "Kostrze 1" (8000 m^2) were detected 49 individuals composed of 7.4 ramets in average with the mean height of generative stalks of 42.0 cm, while at "Kostrze 2" site (5000 m^2) the population achieved 41 plants consisted of 6.7 ramets and the mean length of flowering shoot was 41.2 cm. In Opatkowice (5000 m^2) were noted 16 genets composed of 5.9 ramets. The mean height of generative stalks reached 26.0 cm. It should be added that production of flowers and capsules was similar in all populations (Table 1).

Both populations of *D. superbus* presented low abundance as well. In Opatkowice, 49 ramet clusters occurring in groups was noted within an area of 9000 m^2. The clusters were consisted of 49.9 ramets in average with the mean length of generative shoot of 54.6 cm. In Kostrze (8000 m^2) only 19 randomly distributed ramet clusters consisting of 24.5 ramets were observed. The mean length of generative shoot was 73.7 cm. The production of flowers and fruits was similar in both populations (Table 2).

Probably the most effective way of protecting the studied populations of *Dianthus superbus* and *Gentiana pneumonanthe* is creating gaps combined with removal of expansive plants.