

**INFLUENCE OF STORAGE PERIODS ON GERMINATION OF
PAEONIA TENUIFOLIA L. SEEDS**

Zoobtsova E.A.

Mechnikov Odessa National University, Odessa, Ukraine

Email: k-sorokovsky@ukr.net

Protection of a biological variety is one of the major problems in the modern world. Plants, in turn, represent weak enough link in existing system.

The northern-western region of the Black Sea Shore is critical for protection of natural complexes and plants in their natural locality. Historically this region agriculture was traditionally developed and densely populated, recently resort business intensively develops - all factors contribute to the big deficiency of the agriculture areas. And now those few, already existing, are reserved sites are in so complex ecological conditions, that are not able to provide natural integrity of vegetative communities. Thus, it is necessary to give special attention to all-round studying of biology features of reproduction processes, in particular seed reproduction, native, especially region endemic kinds that further will allow to cultivate them, whenever possible reintroduction in changed anthropogenous, recreational zones [Prokopiv, 2004]. For today it is one of the most perspective ways of protection of the plants, widely practised in many densely populated, economically-developed countries of the western Europe.

Rare relic kind *Paeonia tenuifolia* L. (*Paeoniaceae* L.) was the object of our research, which is registered in «the Red Book of Ukraine* (1996) and in «the European Red List* (1992). The Black Sea Shore endemic in wide understanding is widespread in Ukraine in the south of a forest-steppe zone and in steppe to Crimea, in foothills and on mountain pasture [Kozhevnikov, 1979, by Kuchevevsky, 2001]. In connection with narrow enough area, ecological



"Biodiversity. Ecology. Adaptation. Evolution." Odesa. 2009

requirements, mass destruction this species requires universal protection. Therefore questions of seed reproduction of paeonia represent considerable interest and in the literature accessible to us were not covered.

The purpose of our work was to study of influence of storage periods on germination of *Paeonia tenuifolia* seeds.

Work was made on the basis of botanical garden ONU by I.I.Mechnikov. The following problems have been stated: to reveal features of seed germination at storage in vitro 3-5 years (the initial material has been received from seed laboratory, and also fresh gathered seeds of plants grown up in a botanical garden were taken); to define germination of seeds in cups of Petri and in a ground. Experience was carried out in 10 multiple frequencies (in cups of Petri on 10 seeds, in a ground on 50). In vitro germination it was not observed. At seeding in ground young groves appeared in the summer the next year. Soil germination of fresh gathered seeds has made $67,2 \pm 5,2 \%$, germination of seeds of gathering of 2005 - $27 \pm 3,5 \%$, seeds of gathering of 2003 - $21,8 \pm 1,2 \%$. From the received results it is visible that the greatest germination values has fresh gathered seeds of 2008, which above approximately on 40 % then the germination of seeds gathered in 2005 and in 2003. However in spite of the fact that at storage germination decreases, 2005 and 2003 differ slightly (approximately on 5 %) and it is possible to assume that seeds can not lose long enough germination at storage.

Work was carried out under the direction of D. Ph. Kovalenko S.G.