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СООБЩЕНИЯ

DEVELOPMENT OF GAMETOPHYTES OF THE INTRODUCED *PICEA* SPECIES (PINACEAE) IN THE TAIGA ZONE (KARELIA)

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The study was carried out in the middle taiga subzone. The study is aimed at determining the features of the individual stages of sporogenesis, gametogenesis, and embryogenesis in the indigenous and introduced species of *Picea* A. Dietr. in the taiga zone (Karelia). The appearance of microspores' tetrads in *P. abies* is observed 5–9 days earlier than that in the introduced species. The male gametophyte formation of the studied species lasts 3–8 days. Pollen dispersion in *P. abies* and *P. canadensis* begins (end of May) a week earlier than that in *P. pungens*. For the full development of pollen grains in *P. abies* and *P. canadensis*, the sum of positive temperatures of (>+5°C) 250°C is required, and in *P. pungens* – 360°C. The study revealed that in mid-May the female gametophyte is still at a free-nuclear stage, and by the beginning of June it already has a cellular structure. Embryogenesis begins at the end of July and ends in the second ten-day period of August. In the introduced species, various deviations are observed in the development of the female generative sphere and during embryogenesis. From 37 to 51% of the seeds of the introduced species lack an embryo. The highest percentage of empty seeds and the latest terms of the main stages of morphogenesis are observed in *P. pungens*.

Keywords: conifers, embryogenesis, gametogenesis, introduction, *Picea*, pollen grain, sporogenesis

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