

# 日本の暖温帯に生育する海浜植物 14 種の永続的シードバンク形成の可能性

澤田 佳宏・津田 智 岐阜大学流域圏科学研究センター

Potential for persistent seed bank formation in 14 coastal dune plants in the warm temperate zone in Japan

**Yoshihiro SAWADA and Satoshi TSUDA** River Basin Research Center, Gifu University, Yanagido 1-1, Gifu 501-1193, Japan

Seed germination and burial experiments over more than 12 months were carried out in the field to reveal the potential for persistent seed bank formation in 14 plant species (11 native species and 3 alien species) which are dominant and/or characteristic species of coastal sand dunes in the warm temperate zone in Japan. Results of the seed germination experiment, in which seeds were sown at depths of 0 cm and 5 cm, suggested that *Lathyrus japonicus*, *Glehnia littoralis*, *Calystegia soldanella*, *Vitex rotundifolia*, *Wedelia prostrata*, *Carex kobomugi*, *Carex pumila*, *Fimbristylis sericea*, *Oenothera laciniata*, *Diodia teres* and *Lolium rigidum* could form persistent seed banks close to the sand surface, but that *Ixeris repens*, *Ischaemum antheploroides* and *Zoysia macrostachya* could not. Results of the seed burial experiment, in which seeds were buried at a depth of 100 cm over more than 12 months, suggested that all species could form persistent seed banks at that depth. Seed dormancy or quiescence at a burial depth of 100 cm would be due to the soil temperature. The burial depth of 20-30 cm would be enough to inhibit seed germination. At a zone where the sand accretion rate is high, most of the dispersed seeds would be buried deeply and would form persistent seed banks. In contrast, at a zone where the sand accretion rate is low, the possibility of seed bank formation would vary depending on the dormancy and germination characteristics of the species.

**Key words:** buried seed, coastal vegetation, field experiment, persistent seed bank, soil seed bank