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Species Crosses in the Genus Cucurbita

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SPECIES CROSSES IN THE GENUS CUCURBITA

EDWARD F. CASTETTER

Various attempts were made to cross different varieties belonging to three species. Successful crosses have been made as follows: (1) Hubbard Squash (*C. maxima*) as the pistillate parent x Common Field Pumpkin (*C. pepo*). Viable seeds which produced vigorous fertile F1 plants were secured from this cross. The reciprocal cross produced normal fruits, but no fertile seeds. (2) Hubbard Squash (*C. maxima*) as the pistillate parent x Large Cheese Pumpkin (*C. moschata*) produced fruits which contained no fertile seeds, although otherwise normal. (3) Scalloped Squash (*C. pepo*) as the pistillate parent x Large Cheese Pumpkin (*C. moschata*) produced fruits containing no fertile seeds, although otherwise normal. (4) Bush Crookneck Squash (*C. pepo*) as the pistillate parent x Scalloped Squash (*C. pepo*) produced many fertile seeds. In the last three cases mentioned no reciprocal crosses were made. In the last three cases mentioned all back crosses produced fertile seed.

COMPARATIVE ANATOMY OF HUBAM AND BIENNIAL SWEET CLOVER

ALICE M. CROZIER

Comparative study of the anatomy of the roots, leaves, of one and two-year-old plants leaf petioles, and the flower stalks of both varieties of sweet clover.

RESPONSE OF THE GENUS RHAMNUS TO PUCCINIA CORONATA CORDA

S. M. DIETZ

All of the several species and varieties of *Rhamnus* exposed to infection with *Puccinia coronata* Corda show some degree of infection with some form of crown rust. Eleven species of *Rhamnus* produced aecidiospores which were able to infect oats, from teleutospores developed on oats. Of the susceptible buckthorn species, only *Rhamnus cathartica*, *R. lanceolata* and *R. alnifolia*