

BRIEF COMMUNICATIONS

BIPARENTAL PLASTID INHERITANCE IN *OENOTHERA ORGANENSIS* MUNZ

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In an article on the ultrastructure of pollen grains of *Oenothera organensis* (CRESTI et al. 1983) the authors state in the discussion (last paragraph) that "the present investigation documents an evidence of non-production of mixed cells having egg and sperm plastids side by side, even after successful fertilization so that the uniparental plastom-genome interaction is likely to maintain the characteristics of this S_3S_4 genotype...". If these observations are correct, the strain investigated represents an exception in the species *Oe. organensis*.

Our hybridization experiments with *Oe. organensis* and species of subsection *Oenothera* (*Euoenothera*) clearly document biparental plastid transmission also in *Oe. organensis*. We were able to produce hybrids between several species of *Euoenothera* as seed parent and *Oe. organensis* (subsection *Emersonia*) as pollen parent (STUBBE & RAVEN 1979). By backcrossing with *Oe. organensis* variegated progeny with the genotype of *Oe. organensis* have been established, in which the maternal plastids of *Euoenothera* species are pale while the paternal plastids of *Oe. organensis* are green.

In Düsseldorf variegated *Oe. organensis* of this kind has been maintained vegetatively for several years. By recrossing white and green branches of these plants variegated progeny can be achieved in significant numbers.

In view of these results, which are contradictory to the results of the above mentioned publication, a reinvestigation of the S_3S_4 genotype is recommended, including also genetic experiments.

REFERENCES

- CRESTI, M., F. CIAMPOLINI & R. N. KAPIL (1983): Ultrastructure of S_3S_4 Genotype Pollen Grains of *Oenothera organensis*. *Acta Bot. Neerl.* 32: 177–183.
STUBBE, W. & P. H. RAVEN (1979): A Genetic Contribution to the Taxonomy of *Oenothera* Sect. *Oenothera* (Including Subsections *Euoenothera*, *Emersonia*, *Raimannia* and *Munzia*). *Pl. Syst. Evol.* 133: 39–59.