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KARYOLOGICAL RECORDS

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Chromosome numbers for the Italian flora: 16

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Abstract

This study presents the first chromosome numbers for Italian populations of two species with a Euro-Mediterranean distribution: *Atocion rupestre* (L.) Oxelman (Caryophyllaceae) and *Mantisalca duriaei* (Spach) Briq. & Cavill. (Asteraceae). Both counts confirm the chromosome numbers reported for populations of the same species in other European countries.

Keywords

Asteraceae, *Atocion*, Caryophyllaceae, cytotaxonomy, *Mantisalca*

How to contribute

Texts concerning new chromosome data should be submitted electronically to Antonio Giacò (antonio.giaco@biologia.unipi.it), including indications on voucher specimens and methods used.

Chromosome counts

Atocion rupestre (L.) Oxelman (Caryophyllaceae)

Chromosome number. $2n = 24$ (Fig. 1).

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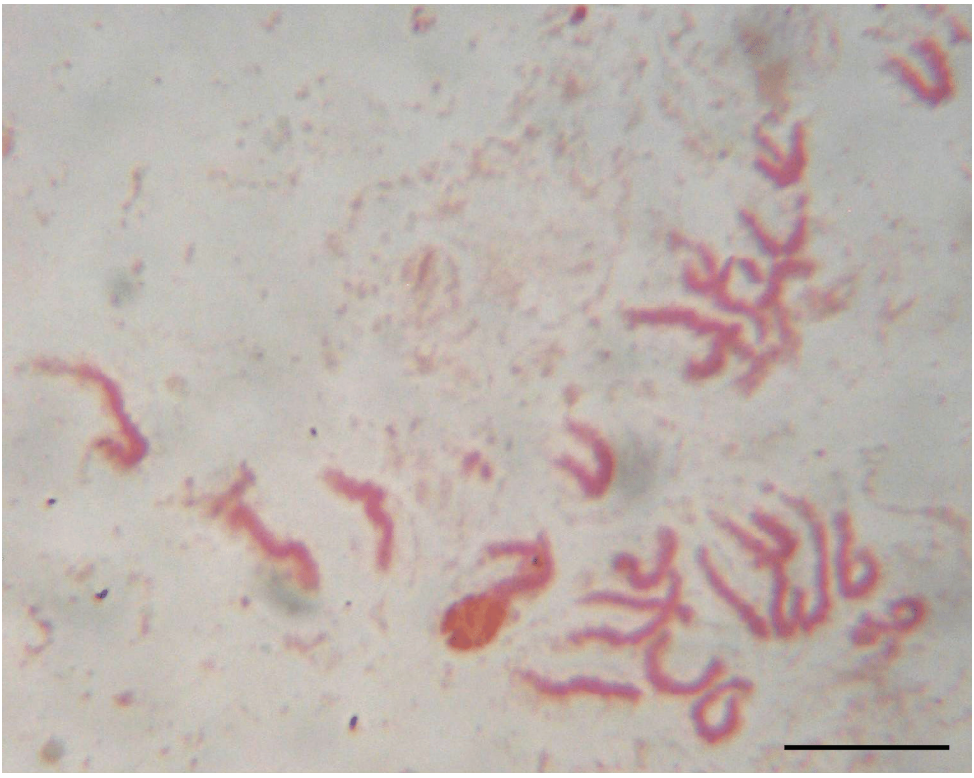


Figure 1. *Atocion rupestre* (L.) Oxelman from Valle delle Messi (Lombardia), 2*n* = 24. Scale bar: 10 μm.

Voucher specimen. Italy. Lombardia. Valle delle Messi (Ponte di Legno, Brescia), siliceous screes, 1983 m s.l.m. (WGS84: 46.3225 N, 10.4856 E), 1 Jul 2024 *Perla Aurora Zanatto* (seeds collected and deposited at the germplasm bank of the Department of Biology, University of Pisa; a herbarium specimen collected from the same area in 2024 is conserved at PI under the barcode PI069158).

Method. Squash preparations were made on root tips obtained from germinated seeds. Root tips were pre-treated with 0.4% colchicine for 3 h and then fixed in Carnoy solution for 1 h. After hydrolysis in 1 N HCl at 60 °C for 7 minutes, the tips were stained with leuco-basic fuchsine.

Observations. *Atocion rupestre* is a perennial herbaceous species distributed on siliceous outcrops and soils in Scandinavia and southern Europe (Marhold 2011). In Italy, it occurs in the Alps and the Apennines (Bartolucci et al. 2024). The disjunct southern European populations survive in the main mountain ranges, which were likely colonized by ancestral lowland populations following the last postglacial warming (Kropf et al. 2006, 2009). This chromosome count is the first for an Alpine population and is consistent with the numbers retrieved from populations growing in Scandinavia (Engelskjoen and Knaben 1971, Halkka 1985, Lövkvist and Hultgård 1999), Sierra Nevada (Küpfer 1974), and Corsica (Contandriopoulos and Gamisans 1974).

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***Mantisalca duriaei* (Spach) Briq. & Cavill. (Asteraceae)**

Chromosome number. 2*n* = 22 (Fig. 2).

Voucher specimen. Italy. Campania. Monteverde (Avellino), Monte della Pila, Campo eolico (WGS84: 41.026182°N, 15.514559°E), Margini aridi dei campi, 620 m, 13 June 2024, *E. Del Guacchio & L. Paino* (NAP0007941).

Method. Squash preparations were made on root tips obtained from germinating seeds. Root tips were pre-treated with 0.3% colchicine for 3 h and then fixed and then fixed in a Carnoy solution (3:1 absolute ethanol-glacial acetic acid) for 30 minutes. After hydrolysis in 1N HCl at 60 °C for 7 minutes, the tips were stained with leuco-basic fuchsine for 3 h.

Observations. This species has been recently reported for Campania (Stinca et al. 2019). However, it is likely that previous records of *Mantisalca salmantica* (L.) Briq. & Cavill. for the same area are to be referred to *M. duriaei*, as probably for many Italian locations (Trotter 1910; Fiori 1927). Our count is the first for Italy and is consistent with those already known for Spain (Hellwig 1994).

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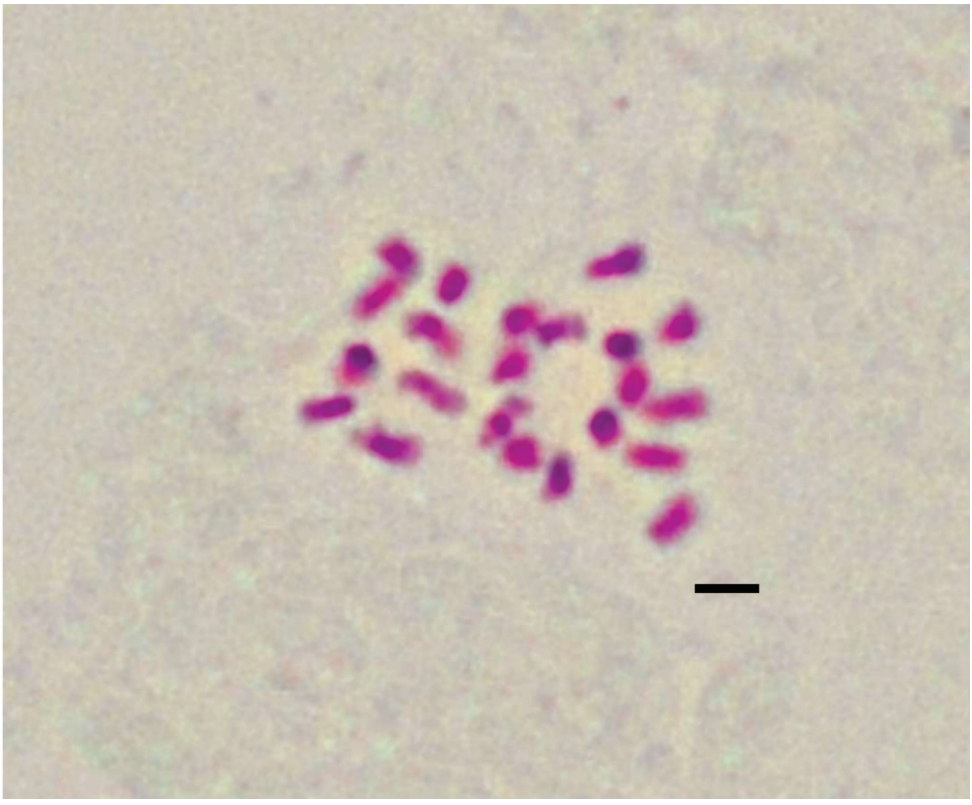


Figure 2. *Mantisalca duriaei* (Spach) Briq. & Cavill. from Monteverde (Avellino), 2*n* = 22. Scale bar: 10 µm.

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