

Mediterranean chromosome number reports – 23

edited by G. Kamari, C. Blanché & S. Siljak-Yakovlev

Abstract

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This is the twenty-three of a series of reports of chromosomes numbers from Mediterranean area, peri-Alpine communities and the Atlantic Islands, in English or French language. It comprises contributions on 56 taxa: *Anthriscus*, *Bupleurum*, *Dichoropetalum*, *Eryngium*, *Ferula*, *Ferulago*, *Lagoecia*, *Oenanthe*, *Prangos*, *Scaligeria*, *Seseli* and *Torilis* from Turkey by Ju. V. Shner, T. V. Alexeeva, M. G. Pimenov & E. V. Kljuykov (Nos 1768-1783); *Astrantia*, *Bupleurum*, *Daucus*, *Dichoropetalum*, *Eryngium*, *Heracleum*, *Laserpitium*, *Melanoselinum*, *Oreoselinum*, *Pimpinella*, *Pteroselinum* and *Ridolfia* from Former Yugoslavia (Slovenia), Morocco and Portugal by J. Shner & M. Pimenov (1784-1798); *Arum*, *Biarum* and *Eminium* from Turkey by E. Akalin, S. Demirci & E. Kaya (1799-1804); *Colchicum* from Turkey by G. E. Genç, N. Özhatay & E. Kaya (1805-1808); *Crocus* and *Galanthus* from Turkey by S. Yüzbaşıoğlu, S. Demirci & E. Kaya (1809-1812); *Pilosella* from Italy by E. Di Gristina, G. Domina & A. Geraci (1813-1814); *Narcissus* from Sicily by A. Troia, A. M. Orlando & R. M. Baldini (1815-1816); *Allium*, *Cerastium*, *Cochicum*, *Fritillaria*, *Narcissus* and *Thymus* from Greece, Kepfallinia by S. Samaropoulou, P. Bareka & G. Kamari (1817-1823).

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Reports (1815-1816) by A. Troia, A. M. Orlando & R. Maria Baldini

1815. *Narcissus obsoletus* (Haw.) Steud. — $2n = 30$ (Fig. 1).

Si: Mazara del Vallo (province of Trapani), contrada “Critazzo”, garigue with *Chamaerops humilis*, ca. 60 m a.s.l., 24 Oct 2013, A. Troia s.n. (PAL).

Díaz Lifante & Andrés Camacho (2007) carried out a detailed taxonomic study on morphological characters in *N. serotinus* L. s.l. and *N. elegans* (Haw.) Spach. They were able to separate *N. serotinus* in 2 taxa, one (*N. serotinus*) endemic to SW Iberian Peninsula and NW Morocco, the other one (*N. obsoletus*) widespread in the Mediterranean area. Díaz Lifante & al. (2009) completed the scenario, attributing different somatic chromosome numbers to the different taxa: $2n = 10$ to *N. serotinus*, $2n = 20$ to *N. elegans*, and $2n = 30$ to *N. obsoletus*. Finally, Aedo (2010) strengthened the taxonomy of this group with his typifications, and Santos-Gally & al. (2012) confirmed the genetic differences among taxa.

The presence of *N. obsoletus* (under *N. serotinus*) and *N. elegans* is well known in Sicily and peninsular Italy (cfr. Lojacono Pojero 1908-09, Fiori 1923-25, Webb 1980), whereas in Sardinia only *N. obsoletus* seems to occur according to Webb (1980) and Govaerts (2013) (but see Fig. 11 in Fernandes 1951, Zangheri 1976, Arrigoni 2006, Fig. 1A in Díaz Lifante & Andrés Camacho 2007); unfortunately, after Pignatti (1982) the two taxa were put together under *N. serotinus* (with some exceptions: e.g. Giardina & al. 2007). So that Conti & al. (2005), in the last checklist of the Italian vascular flora, list only “*N. serotinus*”.

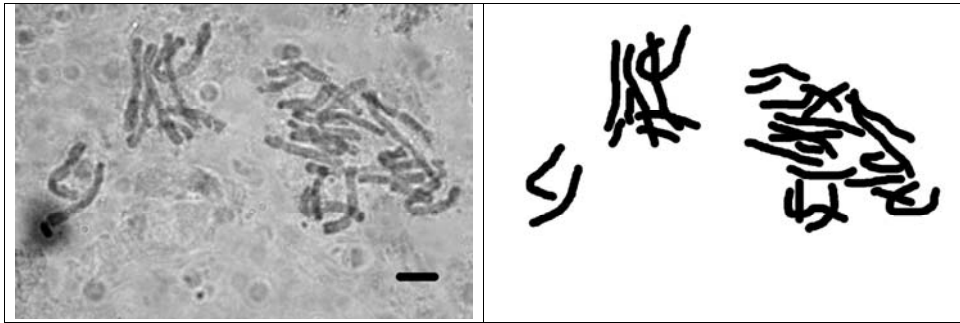


Fig. 1. Mitotic metaphase plate (microphotograph and drawing) of *Narcissus obsoletus*, $2n = 30$. – Scale bar = 5 μm .

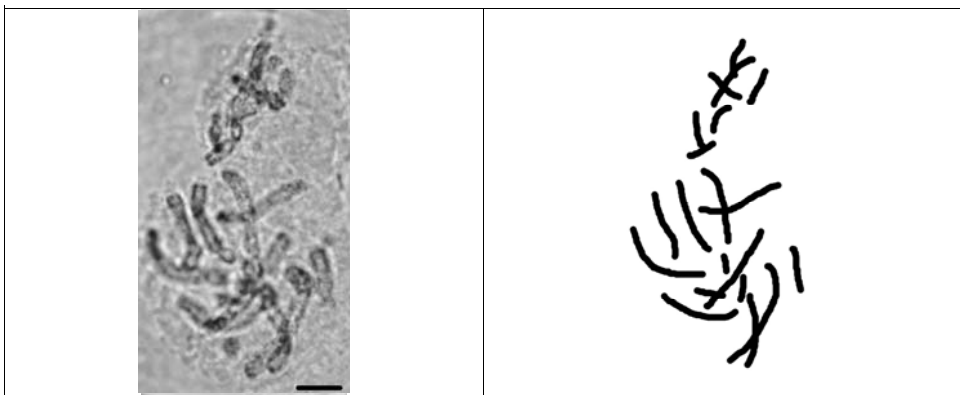


Fig. 2. Mitotic metaphase plate (microphotograph and drawing) of *Narcissus elegans*, $2n = 20$. – Scale bar = 5 μm .

Recently, Carta & Peruzzi (2012) reported $2n = 30$ for *N. obsoletus* from Pianosa Island (Tuscany), confirming previous counts for Italian populations made (under *N. serotinus*) by Frizzi (1984 - Apulia), Selvi & Fiorini (1995 - Tuscany), D'Amato (2004 - Latium and Tremiti Islands), and by Scrugli (1974) for Sardinia. This is the first count on plants from Sicily.

1816. *Narcissus elegans* (Haw.) Spach — $2n = 20$ (Fig. 2).

Si: Mazara del Vallo (province of Trapani), contrada “Critazzo”, garigue with *Chamaerops humilis*, ca. 60 m a.s.l., 24 Oct 2013, *A. Troia s.n.* (PAL).

Narcissus elegans has been found in a small population close to *N. obsoletus*, which is the dominant and widespread species in this open environment. See other information on this species in the comments to the previous one. The report by Garbari & al. (1973) for Sicilian plants of “*N. serotinus*” (collected in the same area of the present report) should be referred to *N. elegans*, as already suggested by Díaz Lifante & al. (2009); it seems to be the only previous report for this species in Sicily and Italy as a whole.

As to the infrageneric position of the two species here treated, current *Narcissus* subdivisions in subgenera and sections (e.g. Webb 1980) seem to be unsatisfactory: data shown in the recent work of Santos-Gally & al. (2012) support a close relationship between these species and the group of *N. tazetta* L., with chromosome numbers between $2n = 20$ and $2n = 22$ (see our previous reports in Baldini 1995).

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Reports (1817-1823) by S. Samaropoulou, P. Bareka & G. Kamari

1817. *Allium ionicum* Brullo & Tzanoud. — $2n = 16$ (Fig. 1A).

Gr: Ionian Islands, Isl. Kephallinia, Poros, 38° 09' 00" N, 20° 46' 14" E, alt. 40 m, 07. Jun 2013, Kamari, Samaropoulou & Spanou 27887, Samaropoulou cult. SK47 (UPA).

Allium ionicum is an endemic species of the Ionian Islands occurring in Lefkada, Kephallonia, Ithaki, Zakynthos and the islets Oxies. It grows on stony slopes and semi-deserted olive groves (Kamari & al. 1998).

The chromosome number is given for the first time for Kephallonia and agree with previous reports for the islands Lefkada and Ithaki (Brullo & Tzanoudakis 1994, Kriemadi & al. 2002).

The karyotype is symmetrical and diploid, consisting of $2n = 14m + 2 \text{ sm-SAT} = 16$ chromosomes. Satellites are observed on the short arm of the third in size chromosome pair. The chromosome size ranges between 7.7 and 12 μm (Fig. 1A).

1818. *Cerastium candidissimum* Correns — $2n = 4x = 36$ (Fig. 1B).

Gr: Ionian Islands, Isl. Kephallinia, Mt. Ainos, 38° 08' 23" N, 20° 39' 31" E, alt. 1596 m, 12 Sept 2008, Karagianni s.n., Samaropoulou cult. no SK28 (UPA).

This taxon is a Greek endemic one, distributed on the mountains of south and central Greece, as well as on Kephallonia island (Mt. Ainos). Its habitat includes dry, rocky places, alpine pastures and limestone (Strid 1986, 1997). The taxon's population in Kephallonia is mainly threatened by the intense grazing and secondarily by parasitic insects (Karagianni 2010).

The chromosome number, according to our knowledge, is given for the first time from Kephallonia and agrees with previous reports for material from Peloponnisos (Mts Parnon, Menalon, Chelmos) by Persson (in Strid 1986). Moreover, the chromosome number $2n = 18$ has been given by Favarger (1969) for material from Mt. Taygetos and by Söliner (1954) for cultivated material of unknown origin. The karyotype is tetraploid, symmetrical consisting of metacentric (m) and submetacentric (sm) chromosomes, ranging in size from 0.8 to 1.8 μm (Fig. 1B).