

## Location of *Ampelodesmos mauritanicus* (Poaceae) on Mt. Etna (Sicily)

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**ABSTRACT.** – *Location of Ampelodesmos mauritanicus* (Poaceae) on Mt. Etna (Sicily). – *Ampelodesmos mauritanicus* on the volcano Mt Etna (Sicily), is here reported for the first time. Five sites were identified in an area situated on the north-eastern face of the volcano between 650 and 1000 m a.s.l.

**Key words:** *Ampelodesmos mauritanicus*, Etna, Location

### INTRODUCTION

*Ampelodesmos mauritanicus* (Poiret) T. Durand & Schinz, *Poaceae* is a Steno-Mediterranean species, originating in North Africa, where it is quite widespread in Algeria, Tunisia and Morocco Balearic Islands, Catalonia, France, the Tyrrhenian side of the Italian peninsula, and is the larger islands including Sicily, where it is widespread. The Adriatic side of the peninsula between Mt. Conero and the Gargano promontory (Fenaroli 1959, Minissale 1993) is the eastern distribution borderline.

Chorology of *Ampelodesmos* in the Italian territory was studied by Fenaroli (1959, 1961) and the vegetation in Sicily was phytosociologically studied by Minissale (1993) and by Gentile regarding the pasture areas in the 's studies of the pasture areas in the territories of Nicosia – Enna (Gentile, 1960) and Ragusa (Gentile, 1962).

Concerning the substrata, this species prefers clayey and calcareous soils and marl, it is also to be found on siliceous substrates as, for example, in the Nebrodes and Peloritani (Minissale 1993) in Sicily, and on Pliocene siliceous-clayey soils in Molise.

*Ampelodesmos* is largely widespread along the coasts and on slopes overlooking the sea, but frequently penetrates into the hinterland, sometimes up to 1000 m a.s.l. (Fenaroli 1959; Pignatti & al. 1962).

In Sicily Minissale (1993) states that in the Palermo area (Mt. Pizzuta) it is to be found at above 1200 m a.s.l.. Moreover, he stresses that the species is absent in the Mt. Etna area, specifying that “although it still grows near Catania in Monte Po on clayey substrates, it does not colonise the adjacent lava”, where the volcanites and the substrate type would seem to prevent its establishment.

Other previous floristic studies concerning either the whole Flora of Sicily (GuSSone 1842; Parlato 1845; Tornabene 1887; Lojacono-Pojero 1908) or the Etna in particular (Strobl 1880; Tornabene 1892) do not report

*Ampelodesmos* occurring in the Etna Territory. In particular Strobl (1880), states that this species is “present in great quantity in other areas but that it is doubtful if it is to be found in the Mt. Etna territory”, and does not consider Rafinesque's (1813) claim that the species is present on Mt. Etna beyond the tree limit to be valid.

As we found *Ampelodesmos* at various sites on Mt. Etna territory during field work, it would seem useful to report our findings.

### STUDY AREA

The sites where *Ampelodesmos mauritanica* was found are on the north-eastern face of the volcano between 650 and 1000 m a.s.l., between Presa village and the area called Spina Pulice, south-west of Linguaglossa (Fig. 1). They are to be found on volcanic soils and particularly (Romano 1982) on lavas with well preserved surface morphology (alkalic basalts) and lava flows sometimes recognizable from surface features. In this part of the Volcano, the landscape is characterized by several terraces partly made up with alloctonous soils where several crops were implanted. Presently several of these crops have long been abandoned.

The bioclimate, on the basis of the thermodynamic data recorded in the Linguaglossa meteorological station (560 m a.s.l.) in the period 1971-1995 is characterized by the ‘thermicity’ index (It) of 319 and, therefore, according to Rivas-Martinez's bioclimatic classification (1994), the territory falls into the lower mesoditerranean bioclimatic belt. Moreover, given that the average annual rainfall is 1185.5 mm, the umbrotype can be defined humid.

### LOCATIONS

Five sites were found (Fig. 1), situated at various altitudes between the inhabited area of Presa (650 m a.s.l.) and



the area called Spina Pulice (1000 m a.s.l.). Their geographic position was measured by a GPS device.

In some of these sites only one or just a few plants occur, while in others *Ampelodesmos* is well represented especially in grazing land on lava substrate on woodland, long abandoned cultivated land (old terraces) or areas at the edge of cultivated fields still used today.

A single specimen of *Ampelodesmos* (site n. 1) is to be found at Spina Pulici, 1000 m a.s.l., on an old lava substrate, in an area subject to pasturing. At another site (n. 2), south-east of Mt Ragamo (1000 m a.s.l.), there is a group of *Ampelodesmos* individuals in a bare area near shrub land hit by fire, where *Cytisus villosus* Pourret is very frequent..

There are two other sites at Rocca Campana (n. 3 and n. 4). The first is at 850 m a.s.l. at the edges of cultivated land within a community characterized by *Pteridium aquilinum* (L.) Kuhn. Here there is a very large population of *Ampelodesmos*, with some individuals situated near *Corylus avellana* L., and *Quercus pubescens* Willd. s.l., *Cytisus villosus* Pourret etc. The second (n. 4), situated further south at 825 m a.s.l., consists of a wide population established on old terraces, not always recognizable and long abandoned, where there is a shrub vegetation dominated by *Cytisus villosus* Pourret, *Spartium junceum* L., and besides *Quercus pubescens* Willd. s.l., and *Rubus ulmi-folius* Schott.

The lowest site, at an altitude of 650 m a.s.l. (n. 5), is near the inhabited area of Presa at the edges of cultivated fields on terraces close to the road. The location of these individuals, which growth hardly being surrounded by crops could represent the remains of a larger population now reduced to just a few specimens because of man's intervention.

The data collected indicate that in these *Ampelodesmos* belongs to heterogeneous vegetation types. Their floristic composition is various and it includes mainly species of the classes *Lygeo-Stipetea* Rivas-Martinez 1978 and *Stellarietea mediae* R. Tx. Lohm. & Prsg. in R. Tx. 1950, sensu Rivas-Martinez (1975) ampl. 1977, as well as some

cultivated species like *Corylus avellana* L., *Vitis vinifera* L. and *Olea europaea* L.. Some vegetation features represent degradation stages of *Quercion-ilicis* Br.-Bl. (1931) 1936 em. Rivas-Martinez 1975 communities.

## CONCLUSION

The occurrence of *Ampelodesmos* at the sites described above was probably favoured by the abandonment of the fields and by the present land use. Should this situation continue, this species could spread further, as indicated by the large number of plants found at some sites.

The heterogeneity of the vegetation characterized by *Ampelodesmos* on Mt. Etna is probably to be attribute to a relatively recent colonization on a volcanic soil.

These findings represent a contribution to what is known about Mt Etna flora and the distribution of *Ampelodesmos* in Sicily.

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RIASSUNTO – Viene qui segnalata per la prima volta la presenza di *Ampelodesmos mauritanicus* (Poiret) T. Durand & Schinz sul vulcano Monte Etna (Sicilia). Sono state rinvenute cinque stazioni sul versante nord-est del vulcano a quote comprese tra 650 e 1000 m s.l.m.

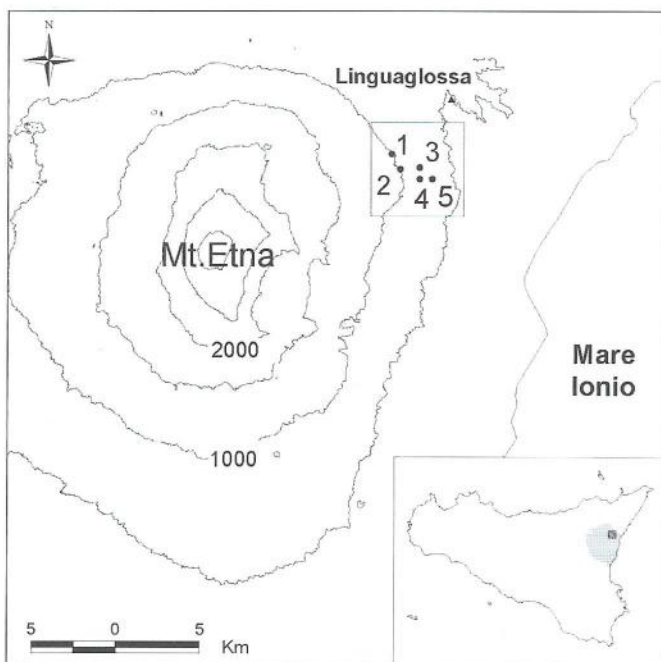


Fig. 1 - Localization of the findings sites, on the NE face of the volcano.