

## On some new reports on the spider fauna of Italy and Sicily (Arachnida Araneae)

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### ABSTRACT

New spiders (Arachnida Araneae) from Sicily (Italy) are reported, some new for Italy, in this paper. Particularly, twelve genera and sixteen new species are examined: *Agelena orientalis* C.L. Koch, 1837; *Cyclosa algerica* Simon, 1885; *Larinia lineata* (Lucas, 1846); *Argenna patula* (Simon, 1874), *Lathys arabs* Simon, 1910, *Marilynia bicolor* (Simon, 1870), *Canariphantes zonatus* (Simon, 1884), *Cresmatoneta mutinensis* (Canestrini, 1868), *Diplocephalus graecus* (O. Pickard-Cambridge, 1873), *Lepthyphantes leprosus* (Ohlert, 1865), *Ostearius melanopygius* (O. Pickard-Cambridge, 1880), *Pelecopsis bucephala* (O. Pickard-Cambridge, 1875), *Pelecopsis inedita* (O. Pickard-Cambridge, 1875), *Lasaeola convexa* (Blackwall, 1870), *Neottiura uncinata* (Lucas, 1846) and *Ruborridion musivum* (Simon, 1873). Additional biological and taxonomic notes are also provided.

### KEY WORDS

New record; *Larinia lineata*; *Cyclosa algerica*; *Lathys arabs*; Araneae.

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### INTRODUCTION

The Spiders are a very diversified group of arthropods. In Italy the order, which worldwide has 49,854 species in 131 families (World Spider Catalog, 2022), is represented by 1,695 species with a high rate of endemism around 20% (Pantini & Isaia, 2019).

From the first catalog of Italian spiders edited by Giovanni Canestrini and Pietro Pavesi (1870) we can extrapolate both the total number of species known for Italy up to then, just 477 (some of which are no longer valid) and the number of species detected in Sicily at the time equal to 62 and only 6

species for Sardinia as reported in Pantini et al. (2013) and Crucitti (2020), excluding synonyms, updated identifications and nomina dubia of the reported species.

For these islands, in particular, not much is known, and in Sardinia such knowledge is practically non-existent. With the above-mentioned works, and the last one in chronological order (Caria et al., 2021), we reach 538 species for the second Mediterranean island while for Sicily with the last work (Dentici & Galasso, 2021) we have a total of 434 species cataloged (Pantini & Isaia, 2019).

All this leads us to believe that in Sicily there

are still ample margins for considerably increasing the number of species.

We are currently conducting various researches on the population of Arachnids in Sicily, of which we summarize some results in the present work: 16 new species of spiders are reported, 3 of which new for Italy, and 12 genera reported for the first time for Sicily; for each species the data relating to the collection are reported.

## MATERIAL AND METHODS

All samples were collected on sight on plants, under the rocks or in their web. The specimens were observed, in laboratory, with stereomicroscope for identification, stored in centrifuge tubes of different sizes and fixed in 75% ethanol (Levi, 1977). The samples are stored in Dentici's collection (Palermo, Italy) and for each sample all the collection data in Italian language and the collector are indicated.

The maps were created using the QGIS open source program and we limited ourselves to depicting the distribution relating to the Western Palearctic, with regional detail for Italy only. Distribution data outside this area was listed in the text. The classification, taxonomic order and nomenclatural arrangement for spiders follow Roberts (1995), Trotta (2004), Pantini & Isaia (2019), World Spider Catalog (2022) and Netwig et al. (2022). Other references have also been used and cited.

## RESULTS

### *Systematics*

Ordo ARANEAE Clerck, 1757  
 Familia AGELENIDAE C.L. Koch, 1837  
 Genus *Agelena* Walckenaer, 1805

*Agelena orientalis* C.L. Koch, 1837 (Figs. 1, 2)

MATERIAL EXAMINED. Sicily (Italy), Palermo, Monreale, 38°00'16.0"N 13°15'40.0"E, 4.VII.2020, 4 females, legit A. Dentici.

DISTRIBUTION. Italy to Central Asia, Iran.

REMARKS. This species is here recorded for the first time in Sicily (for identification see Kovblyuk

& Kastrygina, 2011). Its presence in Italy is reported in only two works (Pesarini, 1994; Trotta, 2005) and both are missing details on the place where it was found. For Pantini & Isaia (2022) the presence in Italy of this species needs confirmation. The specimens were collected on their webs, built on low shrub vegetation.

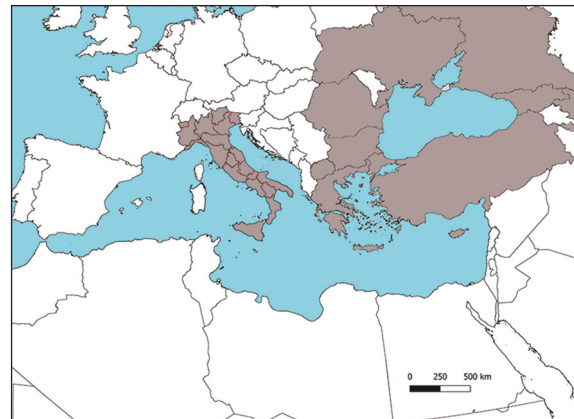


Figure 1. Map distribution of *Agelena orientalis* in Western Palearctic.



Figure 2. *Agelena orientalis* on its web.

Familia ARANEIDAE Clerck, 1757  
 Genus *Cyclosa* Menge, 1866

*Cyclosa algerica* Simon, 1885 (Fig. 3)

MATERIAL EXAMINED. Sicily (Italy), Palermo, Alia, 37°47'20.1" N 13°43'08.6" E, 15.V.2021, 2 females, legit A. Dentici.

DISTRIBUTION. Mediterranean: Portugal, Spain, France, Algeria, Tunisia, Turkey, Bulgaria.

REMARKS. This species, recently discovery also in Turkey (Lecigne, 2021), is here recorded for the first time in Italy.

Both specimens were sampled on their cobwebs, which were “adorned” with the typical “packages” attached to the vertical central line and at the center of which they rested.



Figure 3. Map distribution of *Cyclosa algerica*.

Genus *Larinia* Simon, 1874

*Larinia lineata* (Lucas, 1846) (Fig. 4)

MATERIAL EXAMINED. Sicily (Italy), Trapani, Mazara del Vallo, 16.I.2021, 1 female, legit A. Ditta.

DISTRIBUTION. Western Mediterranean: Portugal, Spain, France, Algeria, Morocco, Tunisia.

REMARKS. The genus is here recorded for the first time in Italy. The specimen was sampled in the evening on its web, built between the low branches of a tree. During the day in the same area no specimens were found, probably the species is active only during the night.

Familia DICTYNIDAE O. Pickard-Cambridge, 1871  
Genus *Argenna* Thorell, 1870

*Argenna patula* (Simon, 1874) (Fig. 5)

MATERIAL EXAMINED. Sicily (Italy), Palermo, 38°10'42" N 13°21'03" E, 25.I.2020, 1 male, legit R. Viviano.

DISTRIBUTION. Europe, Caucasus, Russia (Europe to South Siberia), Kyrgyzstan, China, Iran?

REMARKS. New genus and new species for Sicily. It is reported in Italy only for Piemonte (Isaia et al. 2007), Veneto (Hansen 2007), only one record in Apulia, Manfredonia (Ijland et al., 2012; Pantini & Isaia, 2019) and Isola dell'Asinara in Sardinia (Pantini & Sassu, 2009).

Spider found under boulders of a small stony ground.

Genus *Lathys* Simon, 1884

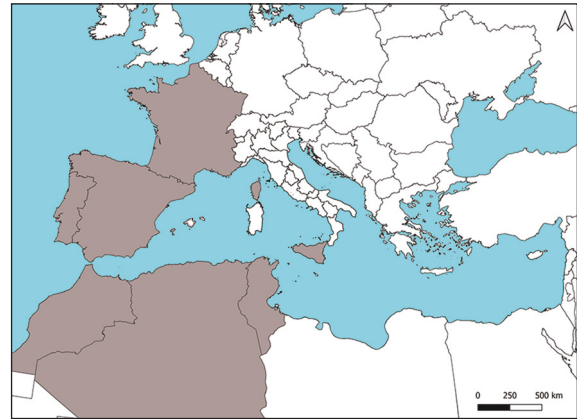


Figure 4. Map distribution of *Larinia lineata*.

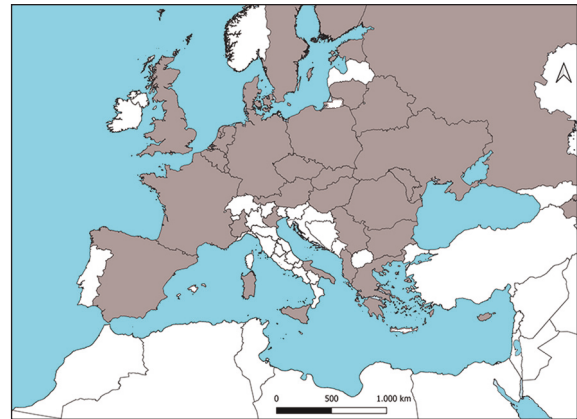


Figure 5. Map distribution of *Argenna patula* in Western Palearctic.

***Lathys arabs*** Simon, 1910 (Fig. 6)

**MATERIAL EXAMINED.** Sicily (Italy), Trapani, Mazara del Vallo, 30.I.2021, 1 male, legit A. Ditta.

**DISTRIBUTION.** Algeria, Tunisia, Greece, Cyprus.

**REMARKS.** The species is here recorded for the first time in Italy. New genus for Sicily.

The specimen was found on a hedge in an urban green area, collected in his web built on the leaves of a *Pittosporum*'s hedge. Identification follows Bosmans et al. (2009).



Figure 6. Map distribution of *Lathys arabs*.

***Marilynia bicolor*** (Simon, 1870) (Fig. 7)

**MATERIAL EXAMINED.** Sicily (Italy), Trapani, Castelvetro, Triscina, 25.IV.2021, 1 male, legit A. Barbera.

**DISTRIBUTION.** Europe to Central Asia, North Africa.

**REMARKS.** The genus is recorded for the first time in Sicily. This species is known in Italy for Piemonte, Lombardia, Emilia Romagna, Liguria, Campania, Calabria and Sardinia (Pantini & Isaia, 2019).

The specimen was sampled on its particular web built on a blade of grass.

Familia LINYPHIIDAE Blackwall, 1859  
Genus *Canariphantes* Wunderlich, 1992



Figure 7. Map distribution of *Marilynia bicolor* in Western Palearctic.

***Canariphantes zonatus*** (Simon, 1884) (Fig. 8)

**MATERIAL EXAMINED.** Sicily (Italy), Trapani, Mazara del Vallo, Riserva Naturale Lago Preola e Gorgi Tondi, 37°36'39.2" N 12°39'07.3" E, 24.III.21, 1 female - 37°36'39.9" N 12°39'59.7" E, 08.IV.2021, 2 females, legit A. Ditta.

**DISTRIBUTION.** Portugal, France, Italy, Greece, Algeria, Morocco, Tunisia.

**REMARKS.** Only species of the genus *Canariphantes* known for Italy and, now, for the first time in Sicily. It is present in Sardinia (Bosmans & Colombo, 2009) and its presence in mainland Italy needs confirmation (Pantini & Isaia, 2019).

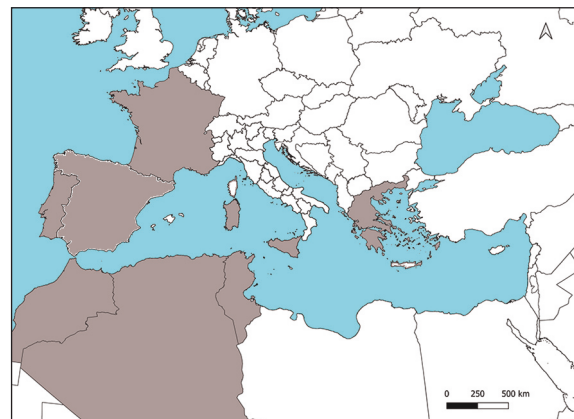


Figure 8. Map distribution of *Canariphantes zonatus*.

Genus *Cresmatoneta* Simon, 1929

***Cresmatoneta mutinensis*** (Canestrini, 1868) (Fig. 9)

MATERIAL EXAMINED. Sicily (Italy), Trapani, Mazara del Vallo, 37°38'02.1" N 12°36'50.6" E, 12.II.2021, 1 female, legit A. Ditta.

DISTRIBUTION. Southern Europe, Russia (Europe), Turkey, Caucasus.

REMARKS. The genus is here recorded for the first time in Sicily. It is widespread in almost all of Italy except for Valle d'Aosta, Piemonte, Trentino, Abruzzo, Molise and Basilicata (Pantini & Isaia, 2019).

The specimen was collected wandering on low vegetation, it was not currently possible to make observations regarding its tritrophic role, although this aspect will hopefully be investigated in the near future. Identification follows Bosselaers (2018).

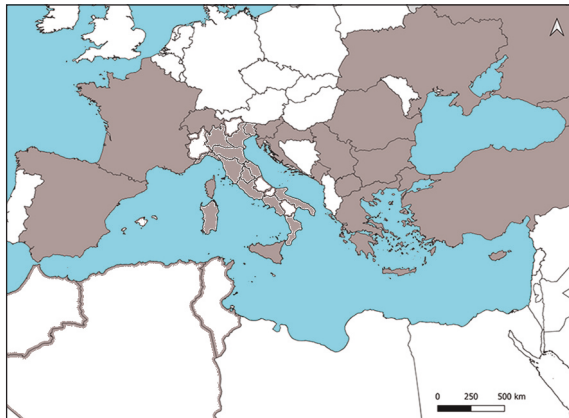


Figure 9. Map distribution of *Cresmatoneta mutinensis*.

Genus *Diplocephalus* Bertkau, 1883

***Diplocephalus graecus*** (O. Pickard-Cambridge, 1873) (Fig. 10)

MATERIAL EXAMINED. Sicily (Italy), Trapani, 03.IV.2021, 3 females, legit: A. Barbera; Sicily (Italy), Trapani, Triscina, 17.IV.2021, 1 female, legit A. Barbera; Sicily (Italy), Trapani, Mazara del Vallo, Riserva Naturale Lago Preola and Gorgi Tondi, 37°36'39.2" N 12°39'07.3" E, 11.IV.2021, 2 females and 1 female subadult, legit A. Ditta;

Sicily (Italy), Trapani, Mazara del Vallo, 05.I.2021, 2 females and 1 male, legit A. Ditta.

DISTRIBUTION. Europe, Madeira, North Africa, Israel.

REMARKS. The genus is here recorded for the first time in Sicily. The Italian distribution is relatively little known. The reports concern Liguria (Pantini & Isaia, 2008), Emilia-Romagna (Zangheri, 1966), Toscana (Millidge, 1979; Brignoli, 1975), Lazio (Denis, 1966; Thaler & Zapparoli, 1993), Puglia (Brignoli, 1972), Campania (Ijland & Helsdingen, 2014) and Sardinia (Pantini & Sassu, 2009).

The specimens were collected mostly wandering on the ground, some of these caught "on the fly" during ballooning.

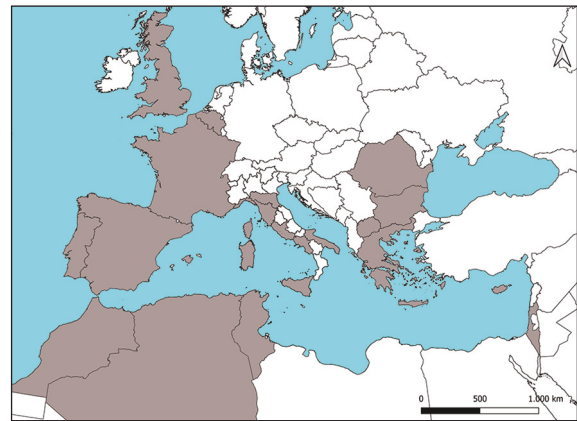


Figure 10. Map distribution of *Diplocephalus graecus*.

Genus *Lepthyphantes* Menge, 1866

***Lepthyphantes leprosus*** (Ohlert, 1865) (Fig. 11)

MATERIAL EXAMINED. Sicily (Italy), Trapani, Valderice, 25.IV.2020, 1 female - 03.V.2020, 1 female, legit S. Surdo.

DISTRIBUTION. North America, Europe, Turkey, Caucasus, Russia (Europe to Far East), Kazakhstan. Introduced to North America, Chile.

REMARKS. The genus is here recorded for the first time in Sicily. The species has been ascertained in Piemonte, Lombardia, Trentino Alto Adige,

Veneto, Friuli Venezia Giulia and Campania (Pantini & Isaia, 2019).

The specimen was found wandering in the evening in the small garden of a house. Troglophile species (Mammola et al., 2018).

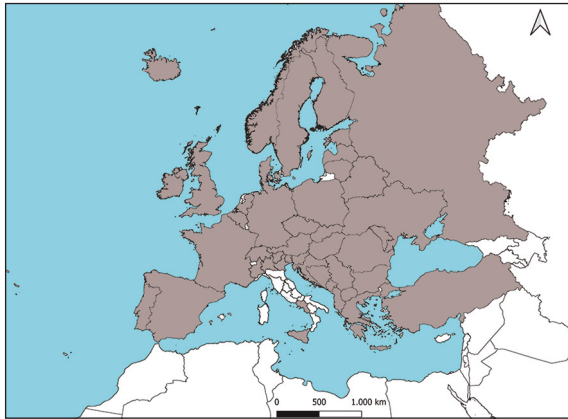


Figure 11. Map distribution of *Lepthyphantes leprosus* in Western Palearctic.

Genus *Ostearius* Hull, 1911

***Ostearius melanopygius*** (O. Pickard-Cambridge, 1880) (Fig. 12)

MATERIAL EXAMINED. Sicily (Italy), Trapani, Castelvetrano, 18.X.2020, 1 female, legit A. Barbera.

DISTRIBUTION. South America. Introduced to Europe, Canary Is. to Egypt and Turkey, South Africa, China, Malaysia, Indonesia, New Zealand.

REMARKS. The genus is here recorded for the first time in Sicily. Alien species known for Piemonte, Liguria, Lombardia, Trentino Alto Adige, Veneto, Friuli Venezia Giulia, Emilia Romagna, Abruzzo, Campania and Calabria (Pantini & Isaia, 2019).

According to Ružička (1995), this species “occurs in a wide variety of habitats, often in association with man”. In this case the specimens was found in a small garden of a house, probably it is a synanthropic species.

Genus *Pelecopsis* Simon, 1864

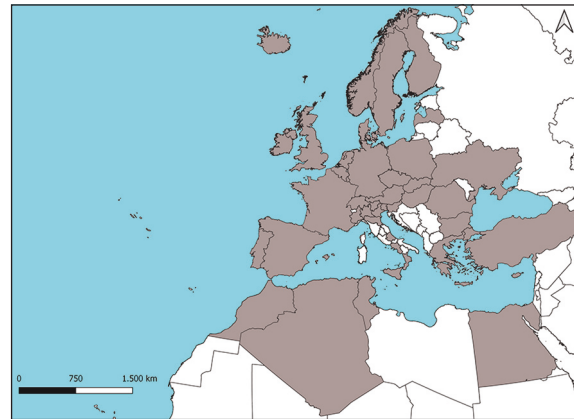


Figure 12. Map distribution of *Ostearius melanopygius* in Western Palearctic.

***Pelecopsis bucephala*** (O. Pickard-Cambridge, 1875) (Fig. 13)

MATERIAL EXAMINED. Sicily (Italy), Palermo, Monreale, Caculla, 24.IV.208, 1 female and 1 male, legit A. Dentici.

DISTRIBUTION. Western Mediterranean: Portugal, Spain, France, Algeria, Morocco, Sardinia.

REMARKS. The genus is here recorded for the first time in Sicily. In Italy, it is found in Sardinia (Helsdingen, 2005; Pantini et al., 2013).

The specimens were collected under the same rock. The male seemed more active, and the presence of the two specimens of different sex in the same place suggests courtship or in any case the search for the other sex by one of the two specimens.



Figure 13. Map distribution of *Pelecopsis bucephala*.

***Pelecopsis inedita*** (O. Pickard-Cambridge, 1875)  
(Fig. 14)

MATERIAL EXAMINED. Sicily (Italy), Trapani, Castelvetrano, 18.X.2020, 1 female, legit A. Barbera.

DISTRIBUTION. Canary Islands, Mediterranean: Portugal, France, Italy, Greece, Algeria, Morocco, Tunisia and Egypt.

REMARKS. The genus is here recorded for the first time in Sicily. In Italy, it is found in Veneto (Ballarin et al., 2011), Liguria (Jackson, 1926), Toscana (Brignoli, 1975), Lazio (Denis, 1966) and Sardinia (Bosmans & Colombo, 2015).

The specimen was collected in an urban green area on a hedge.



Figure 14. Map distribution of *Pelecopsis inedita*.

Familia THERIDIIDAE Sundevall, 1833  
Genus *Lasaeola* Simon, 1881

***Lasaeola convexa*** (Blackwall, 1870)

MATERIAL EXAMINED. Sicily (Italy), Palermo, Monreale, 38°04'43.8" N 13°17'28.7" E, 01.V.2021, 1 female, legit: A. Dentici.

DISTRIBUTION. Mediterranean: Portugal, France, Italy, Greece, Albania, Croatia, Bulgaria, Romania, Algeria, Morocco, Tunisia.

REMARKS. The genus is here recorded for the first time in Sicily. In Italy, it is present in Friuli Venezia Giulia (Di Caporiacco, 1927), Veneto (Di

Caporiacco, 1940), Liguria (Thorell, 1875), Toscana (Picchi, 2020), Lazio (Brignoli, 1967), Marche (Kritscher, 1956) and Puglia (Ijland et al., 2012).

It is the second species of the genus *Laseola* in Sicily, together with *L. testaceomarginata* Simon, 1881, already known (Brignoli, 1968).

Genus *Neottiura* Menge, 1868

***Neottiura uncinata*** (Lucas, 1846) (Fig. 15)

MATERIAL EXAMINED. Sicily (Italy), Trapani, Valderice, 05.IV.2020, 1 male, legit S.Surdo.

DISTRIBUTION. Mediterranean (Portugal, Spain, France, Italy, Greece, North Macedonia, Morocco, Algeria, Tunisia, Turkey).

REMARKS. The species is here recorded for the first time in Sicily. In Italy, it is present in Trentino Alto Adige (Canestrini, 1875), Toscana (Berdondini et al., 2006), Calabria (Ijland & Helsdingen, 2019) and Sardinia (Pantini et al., 2013).

Specimen collected on low vegetation.

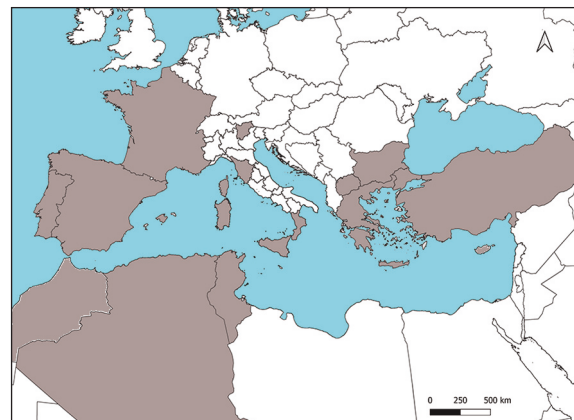


Figure 15. Map distribution of *Neottiura uncinata*.

Genus *Ruborridion* Wunderlich, 2011

***Ruborridion musivum*** (Simon, 1873) (Fig. 16)

MATERIAL EXAMINED. Sicily (Italy), Palermo, Monreale, 38° 04'44.0" N 13°17'28.4" E, 20.III.2020, 1 female and 1 male, legit A. Dentici; Sicily (Italy), Trapani, Mazara del Vallo, 28.XII.2020, 1 female, legit A. Ditta.



Figure 16. Map distribution of *Ruborridion musivum* in Western Palearctic.

**DISTRIBUTION.** Mediterranean (Portugal, Spain, France, Italy, Croatia, Morocco, Algeria, Tunisia and Egypt), India.

**REMARKS.** The genus is here recorded for the first time in Sicily. In Italy, this species is present in Friuli Venezia Giulia (Di Caporiacco, 1927), Umbria (Di Caporiacco, 1936), Campania (Ijland & Helsdingen, 2014) and Sardinia (Pantini et al., 2013).

The specimens of Monreale were collected under a pile of dry vegetation, humid and dark environment, rich in detritivorous invertebrates, while that of Mazara del Vallo was found in low vegetation.

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