Bothriuridae
Buthidae
Chactidae
Chaerilidae
Diplocentridae
**Euscorpiidae**
***Euscorpius***
Hemiscorpiidae
Hetero-scorpionidae
Ischnuridae
Iuridae
Microcharmidae
Pseudo-chactidae
Scorpionidae
Superstitioniidae
Troglotaoysicidae
Urodacidae
Vaejovidae
**HOME**

# KEY TO THE SPECIES OF *Euscorpius*.

This key is based on the keys in Kovarík (1999) and Scherabon *et al*. (2000). See below for full references. Please note that the number of trichobothria and their distribution may vary within the species.

A lot of research are being done on *Euscorpius* taxonomy at the moment. The use of DNA-technology has made it easier to uncover some of the difficulties with this complex genus. New species have been described, and new one is comming. I will try to update this page and the key as soon as I get more information about the changes.

NEW INFORMATION: In a paper in October 2002, Fet & Soleglad have published several important changes for the "*Euscorpius carpathicus* species complex". *E. carpathicus* is now limited to Romania only, *E. tergestinus* is confirmed as a valid species, and two new species (*E. hadzii* and *E. koschewnikowi*) are described. A new species (*E. naupliensis*) from Greece was split from E. italicus in December. I will try to include these changes into the identification key as soon as possible.

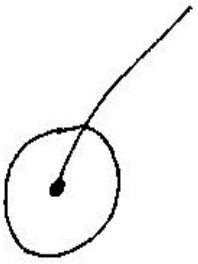
Thanks to Professor Victor Fet for reviewing the key, and for giving important information and suggestions!

Too see the characteristics used in this key, it is neccessary to use a stereoscope/powerful magnifier. Too see the characteristics in this key which are located ventrally, turn the scorpion on its back. To investigate a live scorpion: put the specimen in a clear plastic box. Put soft paper above it so it is fixed against the bottom of the box. Put the lid on, and turn the box around under the stereoscope. The underside of the scorpion can now be investigated without problems.

NB! Live scorpions should not be exposed for more that a few minutes to stereoscope light (specially in the underside of the scorpion), as this light is a very dangerous heat source for the scorpion. A longer exposure will always damage the scorpion and may easily kill it by overheating and dehidratation.

The chela manus is called tibia by some authors. Black dots indicate trichobothria.

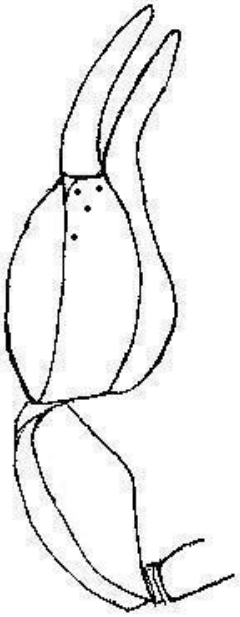
Trichobothria are small sensory hairs that are located on the pedipalps of the scorpions. They look like this (small hairs arising from a cup-shaped depression in the cuticula):



## Key to the species of Euscorpius:

**1.**

- Four trichobothria ventrally on the chela manus (figure): Go to .. **2**

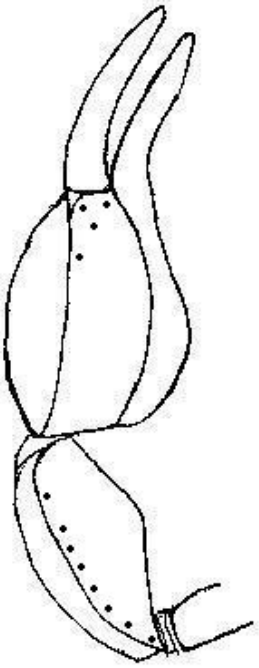


- Five or more trichobothria ventrally on the chela manus: Go to .. **5**

**2.**

- Usually 7 or more trichobothria on the ventral aspect of the

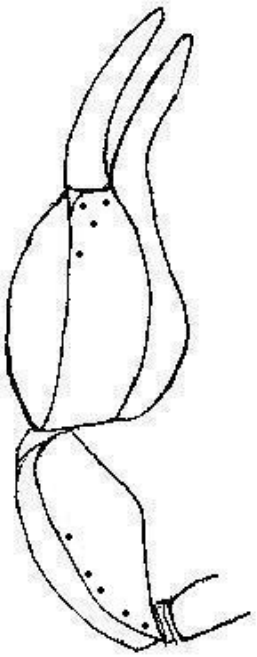
pedipalp patella (figure), and 23-29 on its external aspect. Ventral side of 5 th. metasomal segment bears central granules that usually form a conspicuous keel:
.. ***E. carpathicus*** **(L. 1767)***



*Note!
The species *E. tergestinus* (= *E. mesotrichus*), which is a part of the *E. carpathicus* species complex, is not included in this key. This species is very close to *E. carpathicus*. I will add more information about this as soon as the research on the E. carpathicus complex progress.

- The same as above, but the scorpion orginates from one of the Balearic Islands (Mallorca, Menorca, Cabrera, Ibiza or Formentera). Coloration light brownish tan with little contrasting patterns. Metasoma reduced propotionally, pedipals unusual large:
.. ***E. balearicus*** **Caporiacco, 1950**

- Usually 5-6 trichobothria on the ventral aspect of the pedipalp patella (figure), and 20-22 trichobothria on its external aspect. Ventral side of 5 th. metasomal segment smooth and rounded or has traces of central granules but do not form a conspicuous keel:



Go to .. **3**

**3.**

- Ventral side of 5 th. metasomal segment smooth and rounded. Adults usually not longer than 30 mm:
Go to .. **4**

- Ventral side of 5 th. metasomal with traces of central granules. Almost always 6 trichobothria on the ventral aspect of the pedipalp patella. Adult size avaerage 38 mm. Darker color:
.. ***E. mingrelicus*** **(Kessler, 1874)**

- Ventral side of 5 th. metasomal with traces of central granules. Almost always 5 (rarely 6)

trichobothria on the ventral aspect of the pedipalp patella. Adult size avaerage 32 mm. Lighter color:
.. ***E. gamma*** **Caporiacco, 1950***

* Several types of *Euscorpius* are known from Balkan. These are all included into what is known as "*mingrelicus* complex". Both *E. mingrelicus* and *E. gamma* belongs to this group. A third species, *E. beroni* Fet, 2000, was recently described from this species complex. This species is not included in this key. This species is very closly related to *E. gamma*, and at the moment only professional taxonomists can tell them apart. There is being done research on the "*mingrelicus* complex", and time will show wether this species complex harbors other new species.

**4.**

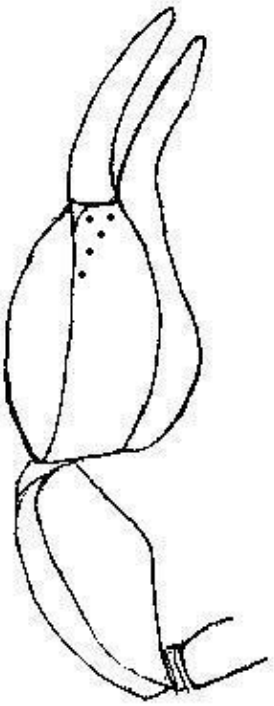
- Always 5 trichobothria on the ventral aspect of the pedipalp patella. Scorpion collected from other places than northern Italy, west of the river Adige (Etsch):
.. ***E. germanus*** **(C. L. Koch, 1837)**

- Five or 6 trichobothria on the ventral aspect of the pedipalp patella. Scorpion collected in northern Italy,

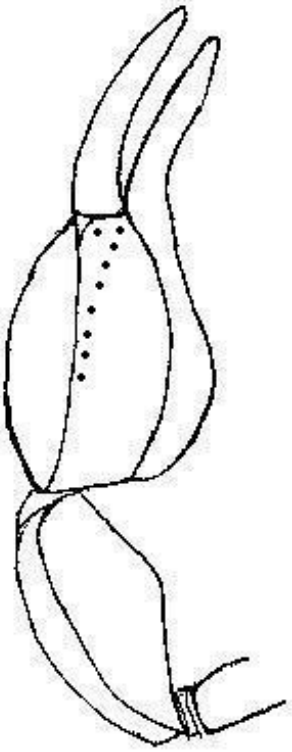
west of the river Adige (Etsch):
.. ***E. alpha*** **Caporiacco, 1950**

**5.**

- Five to six trichobothria ventrally on the chela manus (figure). Usually 10-13 trichobothria on the ventral aspect of the pedipalp patella, and 26-29 on its external aspect. Legs usually light (yellow) colored:
.. ***E. flavicaudis*** **(DeGeer, 1778)**



- Eight to 11trichobothria ventrally on the chela manus (figure). Usually 11-13 trichobothria on the ventral aspect of the pedipalp patella, and 26-45 on its external aspect. Legs usually dark colored. Largest *Euscorpius* with size up to 50 mm:
.. ***E. italicus*** **(Herbst, 1800)**



**References:**

Kovarík, F. (1999).
Review of European scorpions, with a key to species.
Serket, 6 (2), pp. 38-44.

Scherabon, B., B. Gantenbein, V. Fet, M. Barker, M. Kunter, C. Kropf & D. Huber (2000).
A new species of scorpion from Austria, Slovenia and Croatia: *Euscorpius gamma* Caporiacco, 1950, stat. nov. (Scorpiones: Euscorpiidae).
Ekologia (Bratislava), 19 (suppl. 3), pp. 253-262.

Gantenbein, B, V. Fet, M. Barker & A. Scholl (2000).
Nuclear and mitochondrial markers reveal the existence of two parapatric scorpion species in the Alps: *Euscorpius germanus* (C. L. Koch, 1837) and *E. alpha* Caporiacco, 1950, stat. nov. (Euscorpiidae).
Revue Suisse de Zoologie, 107 (4), pp. 843-869.

Fet, V. (2000).
Scorpions (Aarchnida, Scorpiones) from the Balkan Penisula in the collection of the National Museum of Natural History, Sofia. Historia Naturalis Bulgarica, vol. 11, pp. 47-60.

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