



Mediterranean Recluse (Mittelmeerrecluse) *Loxosceles rufescens* (Dufor 1820)



This into English translated leaflet-version is a recapitulation of the leaflets No. 003-06 of the ENVIRONMENTAL CITIZEN INFO (UMWELTbürgerinfo) and the leaflet 129-05 of the CRETE ENVIRONMENT INFO (KRETAUmweltinfo).



Preliminary remark

On the 21st December 2005, it could be provided the evidence of the "Mediterranean Recluse" Mittelmeerrecluse *Loxosceles rufescens* in form of an adult female in Prassas, to the East of Iraklion, for Crete (leg. H. Eikamp (NAOM) / det. Dr. P. Jäger (AraGes/SNG)). Informations on *Loxosceles* are also published in our leaflets; please see leaflets No. 003-06 the ENVIRONMENTAL CITIZEN INFO (UMWELTbürgerinfo), navigator's column arachnids, here also " kind list of the arachnids of Crete " and the leaflet 129-05 of the CRETE ENVIRONMENT INFO (KRETAUmweltinfo), navigator's column animals, at www.kreta-umweltforum.de .

General

Loxosceles belongs to the web spiders (Araneae) and counts to the so-called "Reclusearmkreuze" (Sicariidae Family ¹⁾). In the USA, the *Loxosceles* is represented by the *Loxosceles reclusa* (see fig.) and ten other species. Moreover, *Loxosceles rufescens* - which can be found in Crete quite frequently - is homelike in the Mediterranean region.



¹⁾ Nowadays, a total of 13 species of the 1880 existing of Genus *Loxosceles* Heinecken & Lowe, 1835. Those are: *Loxosceles apachea* Gertsch & Ennik, 1983; *Loxosceles arizonica* Gertsch & Mulaik, 1940; *Loxosceles blanda* Gertsch & Ennik, 1983; *Loxosceles deserta* Gertsch, 1973; *Loxosceles devia* Gertsch & Mulaik, 1940; *Loxosceles kaiba* Gertsch & Ennik, 1983; *Loxosceles laeta* (Nicolet, 1849); *Loxosceles martha* Gertsch & Ennik, 1983; *Loxosceles palma* Gertsch & Ennik, 1983; *Loxosceles reclusa* Gertsch & Mulaik, 1940; *Loxosceles rufescens* (Dufor, 1820); *Loxosceles russelli* Gertsch & Ennik, 1983; *Loxosceles sabina* Gertsch & Ennik, 1983.

Appearance and characteristics

The colouring of the "Reclusearmkreuze" goes from tan, grey-yellow to maroon. While most spiders have 8 eyes, the "Reclusearmkreuze" owns 6 eyes only. The body height, dependent on the species (without legs) and reaches 8 to 15 mm on average; the legs range from 18 to 30 mm. The males are smaller than the females; however, they have longer legs which are not covered with thorns, but with hair.

Occurrence and spreading

Most species of the "Reclusearmkreuze" can be found in the United States; however, some are also found around the Mediterranean. The spider prefers the solitariness and crops up seldom. Normally, it lives in ruins of buildings, but appears also in cellars (and garages) where they stay hidden.

Reproduction and development

The "Reclusearmkreuze" spin a loose, irregular net with very viscous wires. The net serves primarily as a retreat area and hiding place; the "Reclusearmkreuze" go mostly on prey search. The females lay (from May to July) up to 50 eggs which are wrapped in an ivory-coloured cocoon. The young spiders appear after about 1 month; the development is slow and depends on weather terms and food availability. It takes about 1 year until they reach the adult's stage.

Life-style and food

The "Reclusearmkreuze" love hot climate terms. They feed on insects and they also do not disdain dead insects. The life span amounts from 1 to 2 years; they can survive without water and food also longer periods (about 6 months).

Information to the toxicity

The "Reclusearmkreuze" can be counted to the most toxic spider species and a bite may become very unpleasant for a human being. When biting, the animals pump **2)** their poison into the skin which destroys inter alia the isolation layer round the neurones. As a result, so-called "Nekrosen" can be formed, due to which whole skin areas die off. This poison which contains an enzyme called "Shingomyelinase D", is unique up to now in the animal world. It was recently found out that exactly the same toxin is produced, also by ground microbes of the type Corynebacteria. It is most likely that one of those widespread genes has changed sometime, so that the architect's plan for the toxic enzyme developed. It has not been found out yet whether this happened in the genotype of the spiders or in of the bacteria. Nevertheless, in all likelihood, it can be pointed out that the modified gene was transferred from one organism to the other when the microbe and the spider got contact and was bequeathed by both from generation to generation since then.



2) Nevertheless, they bite only when strong physically contacting. The bites normally remain not noticed for hours and become apparent later, by a circular red area on the skin. The symptoms of a light poisoning are pruritus, "Quaddelbildung" (welt creation) and edemas. The symptoms of a heavy poisoning are strong local painsvesication and necrosis (to the clinical picture on day 1 3, 6 and 9 after a *Loxosceles* bite please see fig. and www.notfallmedizin.de). The wounds heal with good surgical dressing in approximately four months. Therapeutic measures are still discussed in the medicine science; there are only a few clinical studies available. Indeed, there exists an antidote which was used, up to now in test phases only (but with measurable success).

Tipps zur Autovermietung und Unterkunft sowie Infos zur **ärztlichen Betreuung** in Gouves, Nordkreta, ca. 18 km östlich von Iraklion



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