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***Cebrennus* Simon, 1880 (Araneae: Sparassidae): a revisionary up-date with the description of four new species and an updated identification key for all species**

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Abstract

The spider genus *Cebrennus* Simon, 1880 is revised again after thirteen years. Four new species are described: *Cebrennus atlas* **spec. nov.** from Morocco (female), *C. flagellatus* **spec. nov.** from Afghanistan (male), *C. laurae* **spec. nov.** from Canary Islands (male), and *C. rechenbergi* **spec. nov.** from Morocco (male and female). *Cebrennus clercki* (Audouin, 1826) **comb. nov.** is transferred from Philodromidae to Sparassidae and considered a nomen dubium. The holotype of *C. aethiopicus* Simon, 1880 is illustrated for the first time. *Cebrennus tunetanus* Simon, 1885 is re-described by illustrating its copulatory organs and some somatic characters, the internal duct system is shown for the first time supporting its placement in *Cebrennus*. An updated identification key for all species is provided. New records of *Cebrennus* species are listed: *C. wagaie* (Simon, 1874) is recorded from Libya and Malta for the first time, the latter representing the first record for the entire genus from Europe. *C. kochi* (O. Pickard-Cambridge, 1872) is recorded from Syria, *C. aethiopicus* from Sudan for the first time. Records from the Canary Islands and from Afghanistan extend the known generic distribution range further to the West and East. Behavioural aspects (burrowing, escaping, mating) of *C. rechenbergi* and partly of *C. villosus* (Jézéquel & Junqua, 1966) are described. Photographs of this behaviour as well as of the habitus of several species are provided.

Key words: taxonomy, behaviour, escaping strategy, transfer, Africa, Asia, Europe, Canary Islands, Morocco, Afghanistan, Malta

Introduction

The genus *Cebrennus* Simon, 1880 contains thirteen species mainly from the south-western Palaearctic (Morocco to Turkmenistan) (Jäger 2000). All species live in arid environments, are nocturnal and build their retreats either under stones, on small plants or in loose sand. Only little more is known of their biology or ecology. The genus was erected by Simon (1874) for two species (*wagaie*, *kochi*) under the preoccupied name *Cebrenis*. Six years later he provided the then valid genus name *Cebrennus* and added three species (*castaneitarsis*, *aethiopicus*, *pulcherrimus*) (Simon 1880), the latter of which was transferred to the genus *Cerbalus* as its type species (Simon 1897). Five years later he described a further species (Simon 1885: *tunetanus*). Fage (1921) reviewed the genus and described two species (*cultrifer*, *powelli*). Denis (1947: *concolor*; sub *Cerbalus*) as well as Jézéquel and Junqua (1966: *villosus*; sub *Cerbalopsis*) each added one species. Jäger (2000) revised the genus and described four new species (*intermedius*, *logunovi*, *mayri*, *rungsi*). Since this last publication no systematic paper was devoted to this genus, which may be due to the fact that *Cebrennus* species seem to be difficult to collect, which along with other reasons makes the identification of specimens to species level and differentiation between species difficult: 1. As in many Sparassidae many “series” contain only single adult specimens, thus investigations of intraspecific variation and matching male and female sex is not easy. In series containing males and females, one has to be careful, since sometimes specimens with different locality data were added subsequently (see notes in *C. castaneitarsis* and *C. wagaie*). 2. Somatic characters (including colour pattern) are very similar between all species. Therefore matching opposite sex according to Edwards (2013) is difficult. 3. In many cases only old material is available, where not all characters (e.g., internal duct system) can be examined and only imprecise locality data are known (e.g., Egypt at the time of Audouin). 4. Membranous parts in the internal duct system of females lead to a strong natural

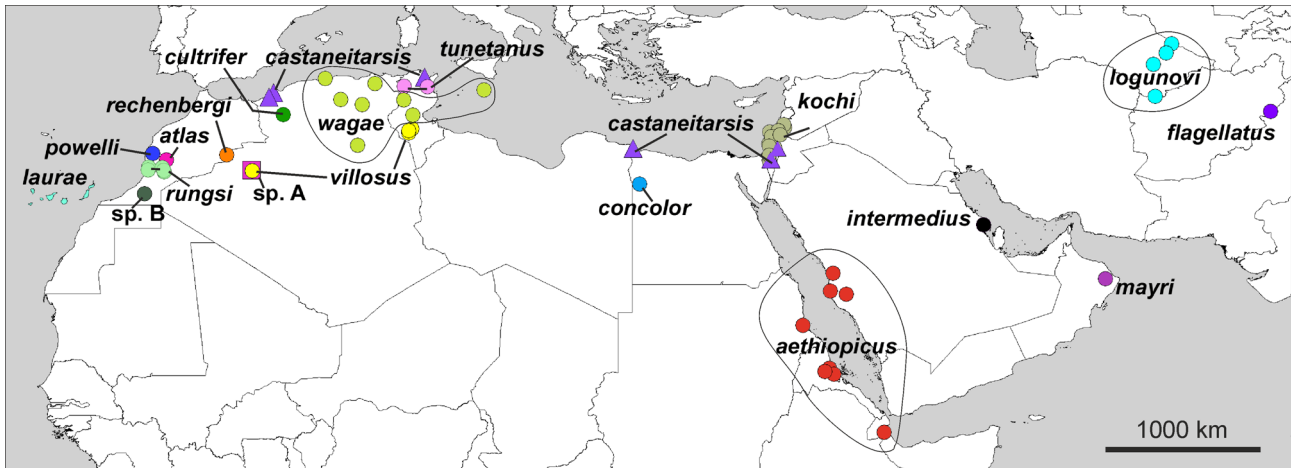


FIGURE 173. Distribution records of *Cebrennus* spp. (according to Jäger 2000 and references therein, this paper and Reimoser 1919). Note that the exact locality for *C. laurae* *spec. nov.* is unknown.

***Cebrennus clercki* (Audouin, 1826) comb. nov. nomen dubium**

Fig. 172

Philodromus clerckii Audouin, 1826: 159 (Description of female, Fig. 172). Roewer 1955: 1623 [„nicht zu deuten“; sub „*Philodromus clerckii* Audouin 1827“]

Sparassus clercki (Audouin). Bonnet 1958: 4102 [Transfer to Sparassidae; sub “*Sparassus clercki* (Sav. & Aud. 1825), Egypte”]

Philodromus clercki (Audouin). Platnick 2000–2014 (Transfer to Philodromidae; nomen dubium, Egypt)

Type material. The original type material (most likely a female holotype; Audouin 1826: “individu femelle de grandeur naturelle”) is supposed to be lost. Since the type locality is not fixed and several *Cebrennus* species occur in Egypt and Israel (El-Hennawy 2002, Jäger 2000, Levy 1989), no neotype is designated here.

Systematic position. The affiliation to the family Sparassidae was once recognised by Bonnet (1958), but not followed by Platnick (2000–2014), who used Roewer’s (1955) catalogue as base for the online version. The placement of the species in the genus *Cebrennus* is supported by the clear concordance of somatic characters shown in Savigny’s plate (Audouin 1826; Fig. 172) with other *Cebrennus* species (see Jäger 2000). Species identity can only be clarified by copulatory organs. Since these are in this case not available as drawings or as from the original type material, *C. clercki* **comb. nov.** is considered a nomen dubium.

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References

Audouin, V. (1826) Explication sommaire des planches d'arachnides de l'Egypte et de la Syrie publiées. In: "Description de l'Egypte...". *Histoire Naturelle*, 1 (4), pp. 1–339. [Arachnida, pp. 99–186]

- Bonnet, P. (1958) *Bibliographia araneorum*. Toulouse, Douladoure, 2 (4), 3027–4230.
- Brackenbury, J. (1997) Caterpillars kinematics. *Nature*, 390, 453.
- Brackenbury, J. (1999) Fast locomotion in caterpillars. *Journal of Insect Physiology*, 45, 525–533.
[http://dx.doi.org/10.1016/S0022-1910\(98\)00157-7](http://dx.doi.org/10.1016/S0022-1910(98)00157-7)
- Caporiacco, L. di (1928) Aracnidi di Giarabub e di Porto Bardia (Tripolis). *Annali del Museo civico di storia naturale di Genova*, 53, 77–107.
- Davies, V.T. (1994) The huntsman spiders *Heteropoda* Latreille and *Yiinthi* gen. nov. (Araneae: Heteropodidae) in Australia. *Memoirs of the Queensland Museum*, 35, 75–122.
- Denis, J. (1947) Spiders. In: Results of the Armstrong College expedition to Siwa Oasis (Libyan desert), 1935. *Bulletin de la Société Fouad I. d'Entomologie*, 31, 17–103.
- Edwards, G.B. (2013) A philosophy and methodology for matching opposite sexes of one species, exemplified by a new synonym in *Myrmarachne* (Araneae: Salticidae). *Peckhamia*, 111.1, 1–12.
- El-Hennawy, H. (2002) A list of Egyptian spiders (revised in 2002). *Serket*, 8, 73–83.
- Fage, L. (1921) Remarques sur les araignées du genre *Cebrennus* suivies de la description de deux especes nouvelles. *Bulletin de la Société zoologique de France*, 46, 157–166.
- Full, R., Earls, K., Wong, M. & Caldwell, R. (1993) Locomotion like a wheel? *Nature*, 365, 495.
<http://dx.doi.org/10.1038/365495a0>
- Harvey, A. & Zukoff, S. (2011) Wind-powered wheel locomotion, initiated by leaping somersaults, in larvae of the southeastern Beach Tiger Beetle (*Cicindela dorsalis media*). *PLoS ONE*, 6 (3), e17746.
<http://dx.doi.org/10.1371/journal.pone.0017746>
- Henschel, J.R. (1990) Spiders wheel to escape. *South African Journal of Science*, 86, 151–152.
- Jäger, P. (1998) First results of a taxonomic revision of the SE Asian Sparassidae (Araneae). In: Selden, P.A. (Ed.), *Proceedings of the 17th European Colloquium of Arachnology, Edinburgh, 1997*. British Arachnological Society, Burnham Beeches, Bucks, pp. 53–59.
- Jäger, P. (1999) Sparassidae—the valid scientific name for the huntsman spider (Arachnida: Araneae). *Arachnologische Mitteilungen*, 17, 1–10.
<http://dx.doi.org/10.5431/aramit1701>
- Jäger, P. (2000) The huntsman spider genus *Cebrennus*: four new species and a preliminary key to known species (Araneae: Sparassidae: Sparassinae). *Revue Arachnologique*, 13, 163–186.
- Jäger, P. (2001) Diversität der Riesenkrabbenspinnen im Himalaya. Über eine Radiation zweier Gattungen in den Schneetropen (Araneae: Sparassidae: Heteropodinae). *Courier Forschungsinstitut Senckenberg*, 232, 1–136.
- Jäger, P. (2002) Heteropodinae: transfers and synonymies (Arachnida: Araneae: Sparassidae). *Acta Arachnologica*, 51, 33–61.
<http://dx.doi.org/10.2476/asjaa.51.33>
- Jäger, P. (2006) Lengthening of embolus and intromittent duct: a review of an evolutionary trend in the spider family Sparassidae (Arachnida: Araneae). In: Deltchev, C. & Stoev, P. (Eds.), *European Arachnology 2005. Acta zoologica bulgarica*, Suppl. No 1, pp. 49–62.
- Jäger, P. & Kunz, D. (2005) An illustrated key to genera of African huntsman spiders (Arachnida, Araneae, Sparassidae). *Senckenbergiana biologica*, 85, 163–213.
- Jézéquel, J.-F. & Junqua, C. (1966) Les araignées du Grand Erg occidental (Sahara Algérien). *Bulletin du Museum national d'Histoire naturelle*, 37, 966–974.
- Junqua, C. (1966) *Recherches biologiques et histophysiologiques sur un solifuge saharien Othoes saharae Panouse*. Thèses présentées à la faculté des sciences de l'université de Paris. Série A, No. 4689, No. d'ordre 5537, 124 pp., 16 pls.
- King, R.S. (2013) *BiLBIO: a biologically inspired robot with walking and rolling locomotion*. *Biosystems and Biorobotics*. Vol. 2. Springer, Verlag, Berlin, Heidelberg, 83 pp.
<http://dx.doi.org/10.1007/978-3-642-34682-8>
- Levy, G. (1989) The family of huntsman spiders in Israel with annotations on species of the Middle East (Araneae: Sparassidae). *Journal of Zoology*, 217, 127–176.
<http://dx.doi.org/10.1111/j.1469-7998.1989.tb02480.x>
- Moradmand, M., Schönhofer, A.L. & Jäger, P. (2014) Molecular phylogeny of the spider family Sparassidae with focus on the genus *Eusparassus* and notes on the RTA-clade and “Laterigradae”. *Molecular Phylogenetics and Evolution*, 74, 48–65.
<http://dx.doi.org/10.1016/j.ympev.2014.01.021>
- Pickard-Cambridge, O. (1872) General list of the spiders of Palestine and Syria, with descriptions of numerous new species, and characters of two new genera. *Proceedings of the Zoological Society London*, 1871, 212–354.
- Platnick, N.I. (2000) *The world spider catalog, version 1.0*. American Museum of Natural History, Available from: <https://web.archive.org/web/20000621105134/http://research.amnh.org/entomology/spiders/catalog81-87/INTRO3.html> (accessed 24 April 2013)
- Platnick, N.I. (2014) *The world spider catalog, version 14.5*. American Museum of Natural History. Available from: <http://research.amnh.org/iz/spiders/catalog/INTRO1.html> (accessed 26 February 2014)
<http://dx.doi.org/10.5531/db.iz.0001>

- Reimoser, E. (1919) Katalog der echten Spinnen (Araneae) des Paläarktischen Gebietes. *Abhandlungen der zoologisch-botanischen Gesellschaft Wien*, 10, 1–280.
- Roewer, C.F. (1955) *Katalog der Araneae von 1758 bis 1940, bzw. 1954*. Bruxelles, 2, 1–1751.
- Simon, E. (1874) Études arachnologiques. 3e mémoire. V. Révision des espèces européennes de la famille des Sparassidae. *Annales de Société entomologique de France*, (5), 4, 243–279.
- Simon, E. (1880) Révision de la famille des Sparassidae (Arachnides). *Actes de la Société linnéenne de Bordeaux*, 34, 223–351.
- Simon, E. (1885) Études sur les Arachnides recueillis en Tunisie en 1883 et 1884 par MM. A. Letourneux, M. Sédillot et Valéry Mayet, membres de la mission de l'Exploration scientifique de la Tunisie. In: *Exploration scientifique de la Tunisie*. Paris, pp. 1–55.
- Simon, E. (1897) *Histoire naturelle des araignées*. 2. Roret, Paris, 192 pp.