



THE DESIDAE OF SOUTH AFRICA

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ABSTRACT

Desidae is a cosmopolitan family represented by 60 genera. Only two species are known from South Africa. For years only a single species was known from South Africa *Desis formidabilis* (O.P. Cambridge, 1890). They are intertidal hunters and are always found in areas with a rocky shore. They are found between the low-water neap and high-water neap tide levels. The species is known from South Africa to Namibia and due to its wide range it is listed as Least Concern. A second species, *Badumma longinqua* L. Koch (1867) known to be invasive was only recently reported from South Africa from two localities. It is an invasive species and recorded from several continents. Due to wide range listed as of Least Concern.

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FAMILY DESIDAE Pocock, 1895

Desidae is a cosmopolitan family represented by 60 genera (World Spider Catalog 2020). For years only a single species of *Desis* Walckenaer, 1837 was known from South Africa. A second species, *Badumma longinqua* L. Koch (1867) known to be invasive was only recently reported from South Africa.

Because the two genera differ so much in their morphology and life style they are discussed separately.

GENUS *BADUMMA* Thorell, 1890

Badumma Thorell, 1890 is represented by 16 species but only one *B. longinqua* L. Koch (1867) known from South Africa.

COMMON NAMES: Grey House Spiders

TYPE SPECIES: *Badumna hirsuta* Thorell, 1890

MORPHOLOGY: Body size TL 6–10mm. Members of this genus are stout spiders with a broad carapace and a cephalic region that is rounded and partly raised above the thoracic region, covered with a dense layer of short and long setae. The oval abdomen is decorated with small dark, symmetrically placed black markings. Their legs are strong and usually banded.

LIFE STYLE: They make cribellate webs between leaves and hollow areas, and are commonly found around houses. Only one species has recently been introduced into South Africa and its presence can be seen by the scrappy cribellate webs it constructs. The female spider does not leave her web unless forced to, but keeps on repairing it – old webs look grey and woolly from constant additions of silk.

TAXONOMIC NOTES: Introduced species



Badumma longinqua female Photo Charles Haddad

Badumna longinqua (L. Koch, 1867)

COMMON NAME: Grey House Spider (introduced from Australia)

NATIONAL STATUS: LC

NATIONAL RATIONALE: An invasive species described by L. Koch (1867) and recorded from several continents. Only recently recorded from South Africa from two provinces (EOO= <1000 km²; AOO=8 km²; 7-1399 m a.s.l.). Due to wide range listed as of Least Concern.

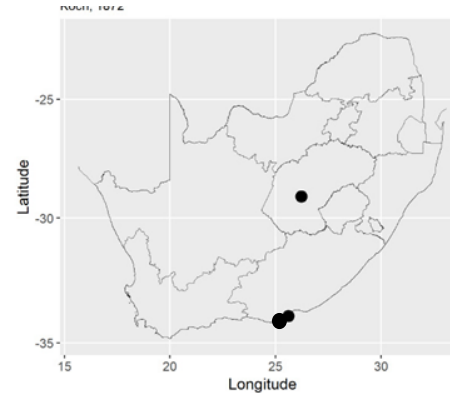
LIFESTYLE: The species so far has been sampled from Jeffrey's Bay, Port Elizabeth and Bloemfontein. It seems to be particularly widespread in Port Elizabeth, where their webs can be found in virtually any part of the city on the outer walls, gutters and window frames of buildings. It seems that the introduction into Port Elizabeth must have occurred several decades ago, considering how well established and common the species is in the area. In contrast, the Bloemfontein populations are only found in horticultural nurseries, and their occurrence seems to be the result of the transport of ornamental plants, trees and flower pots from parts of the country with established populations (Haddad 2011; 2012).

GLOBAL DISTRIBUTION: Eastern Australia. Introduced to USA, Mexico, Uruguay, Japan, New Zealand, South Africa.

DISTRIBUTION IN SOUTH AFRICA: *Eastern Cape:* Port Elizabeth (-33.95, 25.61); Jeffrey's Bay (-34.04, 24.94). *Free State:* Bloemfontein (-29.11, 26.22).

CONSERVATION MEASURES: There are no significant threats to the species. Important to check that species do not disperse throughout the country.

TAXONOMIC NOTES: Known from both sexes.



Web on fence Photo Charles Haddad



Badumna longinqua female Photo Linda Wiese



Male palp ASD

GENUS *DESIS* Walckenaer, 1837

Desidae a cosmopolitan family is represented by 36 genera with a single species *Desis formidabilis* known from Namibia and South Africa.

COMMON NAMES: African long-jawed intertidal spider.

TYPE SPECIES: *Desis maxillosa* (Fabricius, 1793)

MORPHOLOGY: Body size: 18-22 mm, including chelicerae (males slightly smaller). They are pale yellow to dark brown medium-sized spiders. Carapace longer than wide; fovea distinct; eight eyes in two rows that occupy little more than half the head width; chelicerae very large, almost as long as the carapace and directed to the front. Abdomen ovoid clothed with short setae. Legs of moderate length; leg I is without spines and leg II with a few.

LIFE STYLE: *Desis formidabilis* are intertidal hunters and are always found in areas with a rocky shore. They are found between the Low-water Neap and High-water Neap tide levels and are thus submerged twice a day for several hours. Depending on the wave action they either occupy cavities like empty shells or rock holes or hide between stones. When the action of the waves is strong they usually inhabit empty shells made waterproof with silk enclosing enough air for gas exchange during immersion. Where the wave action is weak the spider usually hides beneath rocks and the water-repellent setae on the body help to trap a film of air, which act as an external "lung" (Lamoral 1968a,b; Van Noort 2009).

TAXONOMIC NOTES: *Desis formidabilis* was redescribed by Lamoral (1968).



Desis formidabilis female in limpet Photo Victor Hamilton-Atwell



Desis formidabilis Photo Renata Kruyswijk

Desis formidabilis (O.P. Cambridge, 1890)

COMMON NAME: Long-Jawed Intertidal Spider

NATIONAL STATUS: LC

NATIONAL RATIONALE: A southern Africa endemic described by O.P. Cambridge (1890) from type locality only given as Cape of Good Hope. The species is known from Namibia and South Africa. In South Africa it is known from two provinces (EOO= 109 541 km²; AOO= 64 km²; 1-266 m a.s.l.). Due to its wide range it is listed as Least Concern.

LIFESTYLE: The species is an intertidal hunter, always found in areas with a rocky shore. It is found between the Low Water Neap and High Water Neap tide levels and thus submerged twice a day for several hours.

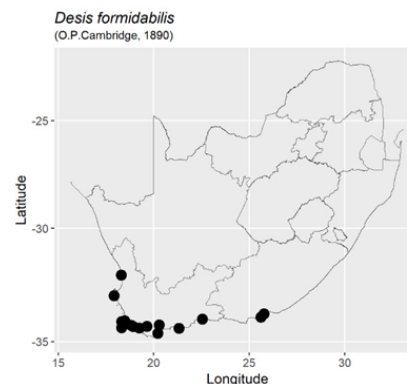
GLOBAL DISTRIBUTION: Namibia and South Africa.

DISTRIBUTION IN SOUTH AFRICA: *Eastern Cape:* Port Alfred (-33.58, 26.89); East London (-33.01, 27.9); Port Elizabeth (-33.95, 25.61); St Croix Island (33.7989, 25.76901).

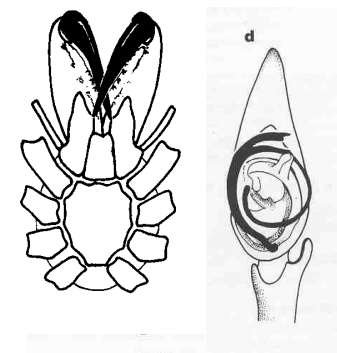
Western Cape: Betty's Bay (-34.34, 18.94); De Hoop Nature Reserve (Koppie Alleen) (-34.45, 20.44); Jongensfontein (-34.36, 21.43); False Bay (Rooi Els) (-34.25, 18.58); Hermanus (Vermont) (-34.4, 19.25); Kommetjie (-34.16, 18.34); Muizenberg (-34.1, 18.47); Arniston (-34.64, 20.22); Cape Point (-34.41, 18.32); Goukamma Nature Reserve (-34.03, 22.55); Lamberts Bay (-32.1, 18.31); Oudekraal (-34.34, 19.64); Saldanha (-33.01, 17.93); St. James (-34.11, 18.46); Onrus (-34.41, 19.19)

CONSERVATION MEASURES: Oil spills and coastal pollution will affect their numbers.

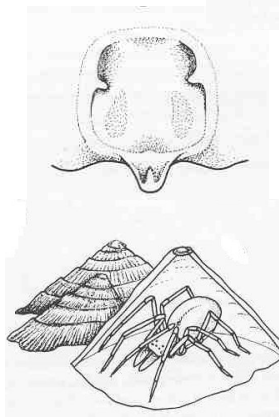
TAXONOMIC NOTES: Known from both sexes.



Desis formidabilis Photo Norman Larsen



Desis formidabilis Photo Victor Hamilton-Atwell



After Dippenaar-Schoeman & Jocqué (1997)



Photo Renata Kruyswijk

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