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The type of the land crab *Cardisoma hirtipes* Dana, 1851 (Crustacea: Brachyura: Gecarcinidae)

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In describing a new species of land crab, *Discoplax celeste*, from Christmas Island, eastern Indian Ocean, Ng & Davie (2012: 95) selected a neotype for the related *Discoplax hirtipes* (Dana, 1851), originally described from Fiji as a species of *Cardisoma* Latreille, 1828. They commented that the type material was no longer extant and a neotype was necessary to stabilise the taxonomy of the species and its allies. The neotype they selected was a recently collected male specimen (64.2 × 53.0 mm, Zoological Reference Collection of the Raffles Museum of Biodiversity Research (now the Lee Kong Chian Natural History Museum), National University of Singapore, ZRC 2010.0415) from Fiji, with colour information as well as fresh tissues that could be used for genetic studies. Evans (1967: 410), however, had listed a syntype specimen of *Cardisoma hirtipes* in The Natural History Museum (NHM) (then the British Museum (Natural History), London) with the catalogue number 1861.44. The neotype selection of Ng & Davie (2012) thus appears to be unwarranted. Türkay (1974: 233), in revising the family, also listed among his material examined the following: “Südsee, Viti (1 Go/1 des Holotypus von *Cardisoma hirtipes* DANA 1851)”. No other data was provided, consequently it was unclear whether any specimen or only the gonopod was actually examined and where it was deposited. There was no other mention of this material in the text.

Michael Türkay (*in litt.* 14 November 2012 to PKLN) explained that no holotype was examined. The specimen referred to in his revision was the one listed in Evans (1967). In the late 1970s, Türkay had written to Ray Ingle, Crustacea Section, NHM, about the specimen. Ingle confirmed that the type was a female measuring 72.0 × 67.0 mm and he sent photographs to Türkay for study. Türkay, after examining the photographs, replied: “Thank you very much for sending me the paralectotype of *C. hirtipes*, which I only got to examine now. Indeed, the specimen belongs to *carnifex* rather than the species for which *hirtipes* is currently used and so it is good to designate it as Paralectotype. I will probably publish a short note on this lectotype selection ...” (*in litt.* 22 February 1980). This note was never published nor was the information reflected in subsequent papers.

The type female specimen in question has since been rehydrated and is now part of the NHM wet collection. It was recently examined and Türkay is correct in that the female (see Fig. 1C–F) is *Cardisoma carnifex* (Herbst, 1796) and not *C. hirtipes*. If this specimen is accepted as a syntype of *Cardisoma hirtipes* Dana, 1851, this female should be selected as the lectotype. This would result in *Cardisoma hirtipes* Dana, 1851, becoming a subjective junior synonym of *Cardisoma carnifex* (Herbst, 1796) and a new name would need to be established for *Discoplax hirtipes*, a widely distributed western Pacific species (Türkay 1974; Ng & Davie 2012). However, the female specimen of *Cardisoma hirtipes* in the NHM collection is nevertheless not considered to be a type specimen.

In describing *Cardisoma hirtipes*, Dana (1851: 253, 1852: 376) listed only one male specimen measuring 58.4 × 47.5 mm from Viti [Fiji] and it was figured by Dana (1852: pl. 24, fig. 4). This indicates that Dana probably had only one specimen, although it is possible he had material not mentioned. Interestingly, William Stimpson, who had material of Dana at his disposal, made the following comment in his remarks of *Cardisoma hirtipes*: “We can discover no essential difference between the Loo Choo [now Okinawa] specimen and those described by Dana from the Fiji Islands ...” (Stimpson 1907: 111). This statement suggests Dana (and Stimpson) had more than one specimen of *C. hirtipes* from Fiji although it is uncertain whether all were types.

The supposed NHM type specimen of *Cardisoma hirtipes* is not the specimen treated by Dana (1851, 1855), being of the wrong sex and larger in size. The specimen figured by Dana (1855; also see Fig. 1A, B) agrees well with what is here defined as *Discoplax hirtipes*, but not *Cardisoma carnifex*. Even though these specimens are females and

The old NHM catalogues, files and dry collection were checked. The NHM specimen was one of a number presented to the museum by the Smithsonian Institution with the note “mostly types selected compared & labelled by W^m Stimpson”. The specimen of *Cardisoma hirtipes* was listed as number 282 and was stated to be from Fiji. It was catalogued in their card system as number 61.44 (= 1861.44). The original tray where the dried specimen was pinned was available and it contained many specimens identifiable as *Cardisoma carnifex* (Fig. 2).

The available evidence suggests that the present NHM specimen is not a type specimen of *Cardisoma hirtipes*. It may have been accidentally and/or incorrectly labeled as such by Stimpson and then presented to NHM. It is also possible that an actual Dana specimen of *Discoplax hirtipes* was originally given to the NHM but a muddle occurred in the intervening period between its receipt and when Ingle and Türkay checked on the specimen. The original dried specimen could have been used for an exhibition in the galleries. This is a possibility since adult *Cardisoma* are relatively large specimens and suited for all manner of displays.

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References

- Anonymous (1851) Conspectus Crustaceorum, &c.; Crustacea of the Exploring Expedition; by James D. Dana. —Crustacea Grapsodea, (Proceedings of the Academy of Natural Sciences of Philadelphia, 1851: 247.). *Scientific Intelligence. II Botany and Zoology. American Journal of Science and Arts, Series 2*, 12 (36), 439. [November]
- Anonymous (1852) Books added to the Library up to December 31st [1851]. *Proceedings of the Boston Society of Natural History*, 4, 171–174.
- Dana, J.D. (1851) Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e Classe Reipublicae Foederatae Duce. Crustacea Grapsodea, (Cyclometopa, Edwardsii). *Proceedings of the Academy of Natural Sciences of Philadelphia*, 5 (10), 247–254. [Published before 30 November 1851 (Anonymous 1851: 439), and 31 December 1851 (Anonymous 1852: 173); also issued as a separate with the same title and pagination 1–8]
- Dana, J.D. (1852) *Crustacea, Part I. United States Exploring Expedition, During the Years 1838, 1839, 1840, 1841, 1842, Under the Command of Charles Wilkes, U.S.N., 13 (1)*, Printed by C. Sherman, Philadelphia, viii + 685 pp.
- Dana, J.D. (1855) *Atlas. Crustacea in United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842, under the Command of Charles Wilkes, U.S.N., 14, 27*. Printed by C. Sherman, Philadelphia, 96 pls.
- Evans, A.C. (1967) Syntypes of Decapoda described by William Stimpson and James Dana in the collections of the British Museum (Natural History). *Journal of Natural History*, 1, 399–411.
<http://dx.doi.org/10.1080/00222936700770391>
- Ng, P.K.L. & Davie, P.J.F. (2012) The Blue Crab of Christmas Island, *Discoplax celeste*, new species (Crustacea: Decapoda: Brachyura: Gecarcinidae). *Raffles Bulletin of Zoology*, 60 (1), 89–100.
- Ng, P.K.L., Guinot, D. & Davie, P.J.F. (2008) Systema Brachyurorum: Part I. An annotated checklist of extant brachyuran crabs of the world. *Raffles Bulletin of Zoology*, 17 (Supplement), 1–286.
- Stimpson, W. (1907) Report on the Crustacea (Brachyura and Anomura) Collected by the North Pacific Exploring Expedition, 1853–1856. *Smithsonian Miscellaneous Collections*, 49 (1717), 1–240, pls. 1–26.
- Türkay, M. (1974) Die Gecarcinidae Asiens und Ozeaniens (Crustacea: Decapoda). *Senckenbergiana biologica*, 55, 223–259.