

Nomenclatural notes on algae. X. The validity of *Hildenbrandia dawsonii* (Ardré) Hollenberg (*Hildenbrandiaceae*, *Florideophyceae*)

Eduardo A. Molinari-Novoa¹ & Michael D. Guiry²

¹*La Molina' National Agrarian University, Lima 15024, Peru* (correspondence: eduardomolinov@gmail.com)

²*AlgaeBase, Ryan Institute, University of Galway, Galway, H91 TK33, Ireland*

Pedroche (2024: 296) discussed the history of samples collected by Elmer Yale Dawson (1918–1966) from Baja California, Mexico, for which the variety *Hildenbrandia canariensis* var. *dawsonii* Ardré (1959: 230, pl. 3: fig. 6) was described; this was later treated as a species by Hollenberg (in Abbott & Hollenberg 1976: 377) as *H. dawsonii* (Ardré) Hollenberg. Ardré (1959: 230) based her description on samples [“*Supra rupes in Oceano Pacifico ad oras Mexicae* (E. Y. Dawson).]” sent to her by Dawson.

Pedroche (2024: 296) concluded that *Hildenbrandia canariensis* var. *dawsonii* Ardré was invalidly published and should be treated as a designation as “...there must be a type indicated for validation of the taxon, but nothing like that was stated”, citing Art. 40.1 of the Shenzhen Code, currently superseded by the Madrid Code (Turland & al. 2025), which states that “Publication on or after 1 January 1958 of the name of a new taxon at the rank of genus or below is valid only when the type of the name is indicated”. Therefore, according to Pedroche (2024), there is no correct and valid name available for the taxon known as *Hildenbrandia canariensis* var. *dawsonii* or *Hildenbrandia dawsonii* and he proposed a new species name, *Hildenbrandia ardreae* Pedroche, based upon a gathering different from that cited in Ardré (1959), *Dawson 10572* (AHFH ex UC 1853247), citing a single slide (*Dawson slide 1690*) taken from the type gathering of *H. canariensis* var. *dawsonii* as paratype. Pedroche (2024: 296) refers to Art. 46.1 as the reason of invalidity, but this appears to be a lapsus, as Art. 46 deals with author citations and not with validity, and the author intended to cite Art. 40.1.

Pedroche (2024) is correct that there is no explicit designation of a type in Ardré (1959), nor there is any clear intention to validate the name in the combination proposed by Hollenberg (in Abbott & Hollenberg 1976) by designating a type. However, Art. 40.1 cannot be applied in isolation; Art. 40.3 states that “For the name of a new species or infraspecific taxon published on or after 1 January 1958, mention of a single specimen, a single gathering or a part thereof, or an illustration is acceptable as indication of the type, even if that element is not explicitly designated as type (but see Art. 40.4) or if it consists of two or more specimens as defined in Art. 8 (but see Art. 40.5)”. Furthermore, the necessity of explicitly stating the type with “*typus/holotypus*” (or an equivalent in a modern language), and the institution in which the type is preserved is only necessary for taxa published after 1 January 1990 (Arts. 40.4 and 40.5). Thus, to accept the hypothesis of the invalidity of *H. canariensis* var. *dawsonii*, no “single specimen, single gathering or a part thereof” should have been cited in the original protologue of Ardré (1959).

However, Ardré (1959, expl. pl. 3: fig. 6) gives “Marine algae of Pacific Mexico; on stones, 10 miles west of Punta Malarrimo, Bahia Vizcaino, Baja Calif. April 1950, n° 9962”, that is, a single gathering congruent with AHFH ex UC 1883773. We are confident that Ardré referred to *Dawson 9962* not only citing the number, but because, in a footnote on page 230, she thanks Dawson “*pour les échantillons qu'il m'a fait parvenir*” [for the samples he sent me]. *Dawson 9962* corresponds to a gathering, defined in the Glossary of the Code as “Material collected by the same collector(s) at the same time from a single locality and presumed to be of a single taxon”, fulfilling the

requirement of Art. 40.1, thus rendering *H. canariensis* var. *dawsonii* and the combination based upon it, *H. dawsonii*, valid.

The specimens from the gathering *Dawson 9962* used by Ardré are, according to Pedroche (2024), lost. *Dawson 9962* is currently represented by eleven rocks and pebbles (Pedroche 2024: 294: fig. 2 c) and *Dawson's slide 1690* at UC. Pedroche (2024) reported that the samples still available do not correspond with Ardré's protologue, and some are not even *Hildenbrandia*, as is often the case with crustose red algae on stones. Only *Dawson's slide 1690* thus correspond to the protologue of the variety. Following Arts. 8.2 and 9.14, particularly in respect of "disregarding admixtures", the only original material available for *H. canariensis* var. *dawsonii* other than the figures in Ardré (1959: pl. III: figs. 6 a–c) is the cited slide, which could be treated as a syntype under Art. 8.3, since Ardré did not specify the repository of the type. The *Dawson slide 1690* mentioned at AHFH ex UC by Pedroche (2024: 296) may be the slide used by Ardré and subsequently returned to Dawson, but this cannot be verified.

Hildenbrandia dawsonii (Ardré) Hollenberg (in Abbott & Hollenberg), *Marine algae of California*: 377, fig. 318, 1976.

Basionym: *Hildenbrandia canariensis* var. *dawsonii* Ardré, *Revue Algologique, Nouvelle Série* 4: 230, pl. 3: fig. 6, 1959 (as "*Hildenbrandia canariensis* var. *Dawsonii*").

Lectotype (here designated): Mexico, Baja California, Sebastián Vizcaíno Bay, on stones, 10 miles west of Punta Malarrimo, *Dawson's slide 1690* from *Dawson 9962* (AHFH ex UC 1883773).

Epitype (for above lectotype): Mexico, Baja California, Punta Norte, Cedros Island (28°22'26" N; 115°13'21" W), *Dawson 10572* (AHFH 57949 ex UC 1853247).

Registration (of lectotype and epitype): <http://phycobank.org/107222>

Heterotypic synonym: *Hildenbrandia ardreae* Pedroche, *nom. superfl. Phytotaxa* 666: figs. 1, 2, 2024.

Representative description and illustration: Abbott & Hollenberg (1976: 377, fig. 318).

Note: *Dawson 9962* was included by Dawson (1953: 96–97) as *Hildenbrandia prototypus* var.

kerquelensis Askenasy from the Kerguelen Islands (Askenasy (1888: 30), currently *Hildenbrandia kerguelensis* (Askenasy) Y.M.Chamberlain (Chamberlain 1962: 372, pl. 82).

Designating the holotype of *H. ardreae* as the epitype of *H. canariensis* var. *dawsonii* preserves the intention of Pedroche (2024: 297) of providing a "specimen likely suitable to extract DNA" to facilitate future phylogenetic studies.

Abbott, I.A. & Hollenberg, G.J. (1976). *Marine algae of California*. pp. [i]–xii, [1]–827, 701 figures. California: Stanford University Press.

Ardré, F. (1959). Un intéressant *Hildenbrandia* du Portugal. *Revue Algologique, Nouvelle Série* 4: 227–237, 1 table, 3 plates.

Askenasy, E. (1888). Algen mit Unterstützung der Herren E. Bornet, E. Grunow, P. Hariot, M. Moebius, O. Nordstedt bearbeitet. In: *Die Forschungsreise S.M.S. "Gazelle"*. Botanik. (Engler, A. Ed.) Vol. 4, pp. [1]–58, 12 plates. Berlin: Ernst Siegfried Mittler und Sohn.

Chamberlain, Y.M. (1962). Notes on two species of *Hildenbrandia*. *Nova Hedwigia* 4: 371–373.

Dawson, E.Y. (1953). Marine red algae of Pacific Mexico. Part 1. Bangiales to Corallinaceae subf. Corallinoidae. *Allan Hancock Pacific Expeditions* 17: 1–239, plates 1–33.

Pedroche, F.F. (2024). *Hildenbrandia ardreae* sp. nov. (Rhodophyta), recorded before as *Hildenbrandia dawsonii* (nom. inval.). *Phytotaxa* 666(4): 291–297, 3 figures.

Turland, N.J., Wiersema, J.H., Barrie, F.R., Gandhi, K.N., Gravendyck, J., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Klopffer, R.R., Knapp, S., Kusber, W.-H., Li, D.-Z., May,



T.W., Monro, A.M., Prado, J., Price, M.J., Smith, G.F. & Zamora Señoret, J.C. editors (2025). *International code of nomenclature for algae, fungi, and plants (2025 Edition Madrid Code)* Regnum Vegetabile Volume 162. pp. [i]–xlvii, 1–303. Chicago & London: The University of Chicago Press.