
A list of Mosses from the Island of Kadavu, Fiji

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Abstract: Tuiwawa, S. H. (2023): A list of Mosses from the Island of Kadavu, Fiji. *Frahmia* 38:1-4.*

Ten moss species are reported from the island of Kadavu in Fiji. The species comprises of *Calymperes porrectum*, *Leucobryum sanctum*, *Ectropothecium arcuatum*, *Vesicularia inflectens*, *Himantocladium implanum*, *Homaliodendron flabellatum*, *Thamnobryum ellipticum*, *Thamnobryum sublatifolium*, *Clastobryum cuculligerum* and *Thuidium samoanum*. These are represented in the families: Calymperaceae, Dicranaceae, Hypnaceae, Neckeraceae, Sematophyllaceae, and Thuidiaceae. All ten specimens are deposited as permanent voucher collections at the SUVA herbarium, in Fiji.

1. Introduction

The island of Kadavu is one of the furthest islands from the main island of Viti Levu, in Fiji. It is an island with a lesser-known area of bryophyte collection. For the last 20-30 years, the publication about mosses in Fiji has only been a handful of accounts focused mostly on the principal islands: Viti Levu, Vanua Levu, Taveuni, and Ovalau. Hence, it has only been through funded projects, that the opportunity to visit and carry out collections in some of its remote locations, is made possible.

In September of 2011, the project team under the CEPF project grant #58211, spent a short week of travel and collection on the island of Kadavu, together with visiting bryologists from the Field Museum in the USA. On the island, the team collected opportunistically where permission was granted and so, the team was able to visit and collect specimens across two sites on the island.

According to past literature, prior collections on the island include locality sites in Namata above Galoa Bay (Whittier, 1975), and Mt. Nabukelevu (Bartram, 1936). These include citations to mosses such as *Hypnodendron subspininervium*, *Distichophyllum vitianum*, *Leucobryum candidum*, and *Syrrhopodon albo-vaginatus*. While recent literature to further current information is limited, the overall number of mosses on the island is estimated to increase with the current and later publications by visiting colleagues.

Listed here are some of the species of mosses that the team collected during the project visit back in 2011.

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2. Collection Site

Kadavu Island

The island of Kadavu has a total area of 411 hectares. The main administrative center of Vunisea is a semi-urban operating center that has an airport, hospital, and government station situated within close relative proximity. The Kadavu group of islands is located south of the main island of Viti Levu and is one of Fiji's southernmost group of islands (Figure 1). The island is 60km long and 365m to 8km broad. It is the largest island in the Kadavu group of islands in the province of Kadavu and is the fourth largest island in Fiji.

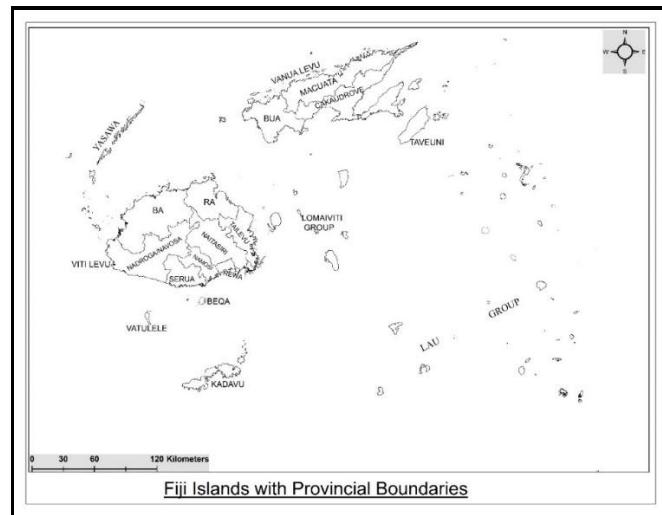


Figure 1: Fiji Islands with provincial boundaries. Source: CI-FJ, 2022

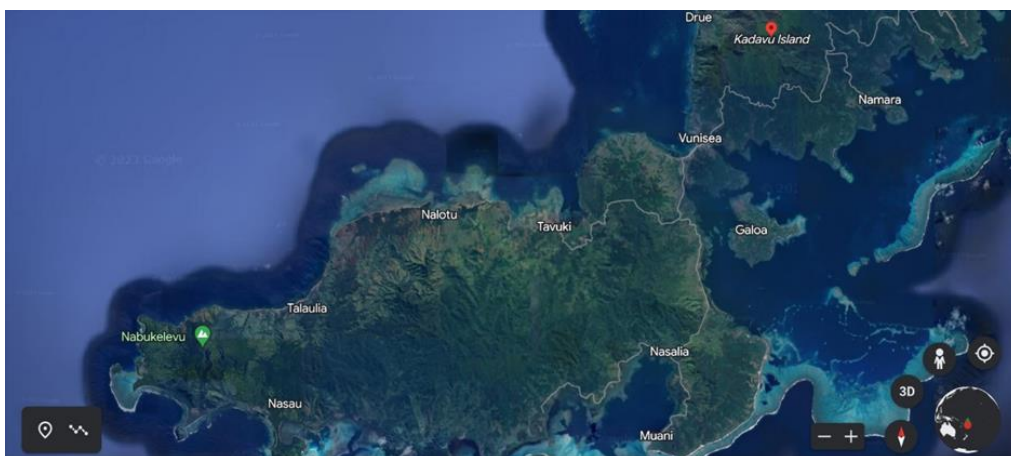


Figure 2: Site locations - Collection sites 1, 2. Source: Google map, 2023

Collection Site (Figure 2)

Site 1: FIJI ISLANDS, Kadavu group of Islands, Kadavu Island, Province of Kadavu: Along Namara road about 3km from Vunisea, 130-160m a.s.l. 19°07'38'', 177°57'20''. 6 September 2011.

Site 2: FIJI ISLANDS, Kadavu group of Islands, Kadavu Island, Province of Kadavu: At the ridge and upper slope of Mt. Nabukelevu, 750-805m a.s.l. 19°07'06'', 178°58'48''. 9 September 2011.

3. List of Species**CALYMPERACEAE**

1. *Calymperes porrectum* Mitt.

Collection Site 1. Tree trunk. SHT 2028/2011. Herbarium No.: SUVA 37479.

DICRANACEAE

2. *Leucobryum sanctum* (Nees ex Schwagrichen) Hampe.

Collection Site 1. On a tree trunk. SHT 2029/2011. Herbarium No.: SUVA 37487.

HYPNACEAE

3. *Ectropothecium arcuatum* Mitt.

Collection Site 1. On soil surface. SHT 2045/2011. Herbarium No.: SUVA 37483.

4. *Vesicularia inflectens* (Brid.) Mull. Hal.

Collection site 1. Tree trunk. SHT 2027/2011. Herbarium No.: SUVA 37495.

NECKERACEAE

5. *Himantocladium implanum* (Mitt.) M. Fleisch.

Collection Site 1. On soil surface; SHT 2039/2011. Herbarium No.: SUVA 37485.

6. *Homaliodendron flabellatum* (Sm.) Fleisch.

Collection Site 2. On leaves of the tree. SHT 2025/2011. Herbarium No.: SUVA 37486.

7. *Thamnobryum ellipticum* (Bosch & Sande Lacoste) Nieuwland.

Collection site 1. Tree trunk. SHT 2032/2011. Herbarium No.: SUVA 37492.

8. *Thamnobryum sublatifolium* (Dixon) W. Schultze-Motel.

Collection Site 2. Tree trunk. SHT 2031/2011. Herbarium No.: SUVA 37493.

SEMATOPHYLLACEAE

9. *Clastobryum cuculligerum* Tixier.

Collection Site 2. Tree trunk. SHT 2030/2011. Herbarium No.: SUVA 37481.

THUIDIACEAE

10. *Thuidium samoanum* Mit.

Collection Site 2. Decayed wood. SHT 2044/2011. Herbarium No.: SUVA 37494.

The ten listed moss species are additional to the moss flora of Kadavu. These are designated to six moss families: Calymperaceae, Dicranaceae, Hypnaceae, Neckeraceae, Sematophyllaceae, and Thuidiaceae. Amongst the preliminary diversity of these taxa, it should also be mentioned that the majority of these species are newly recorded from the island. Even though the collection is relatively small, it should not be perceived as having any lesser significance or priority in terms of the added value it already has on the existing limited information about mosses on the island.

4. Acknowledgments

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5. References

- BARTRAM, E. (1936). Contribution to the mosses of Fiji. *Occ. Pap. B. P. Bishop Mus.* 11(20):1-30. <http://hbs.bishopmuseum.org/pubs-online/pdf/op11-20.pdf>
- WHITTIER, H. (1975). A Preliminary List of Fijian Mosses. *Biological Sciences* 38(2): 85-106. <https://www.jstor.org/stable/24319632>