This page intentionally left blank.
The New England Botanical Club, Inc.
Botanical Museum, Oxford Street, Cambridge, Massachusetts 02138

Conducted and published for the Club, by
NORTON H. NICKERSON, Editor-in-Chief

Associate Editors
A. LINN BOGLE
WILLIAM D. COUNTRYMAN
GERALD J. GASTONY
ROBERT T. WILCE

GARRETT E. CROW
RICHARD A. FRALICK
NORTON G. MILLER

RHODORA,—Published four times a year, in January, April, July, and October. A quarterly journal of botany, devoted primarily to the flora of North America. Price $20.00 per year, net, postpaid, in funds payable at par in the United States currency at Boston. Some back volumes and single copies are available. Information and prices will be furnished upon request. Subscriptions and orders for back issues (making all remittances payable to RHODORA) should be sent to RHODORA, Botanical Museum, Oxford Street, Cambridge, Mass. 02138. In order to receive the next number of RHODORA, changes of address must be received prior to the first day of January, April, July or October.

Scientific papers and notes relating to the plants of North America and floristically related areas will be considered by the editorial committee for publication. Articles concerned with systematic botany and cytotaxonomy in their broader implications are equally acceptable. Brevity is urged whenever possible in all papers. Short items will be published on otherwise blank end pages as soon as possible, even if they appear ahead of longer articles already accepted. All manuscripts should be submitted in TRIPlicate AND MUST BE DOUBLE (AT LEAST 3/8 OF AN INCH) OR TRIPLE-SPACED THROUGHOUT. Please conform to the style of recent issues of the journal. See "Instructions to Contributors to RHODORA" at the end of each issue. Extracted reprints, if ordered in advance, will be furnished at cost. RHODORA assesses modest page charges.

Address manuscripts and proofs to:
Joan Y. Nickerson
Managing Editor, RHODORA
Phippen-LaCroix Herbarium, Dept. of Biology
Tufts University
Medford, Mass. 02155

Second Class Postage Paid at Boston, Mass.

PRINTED BY
THE LEXINGTON PRESS, INC.
LEXINGTON, MASSACHUSETTS

Cover illustration

Ledum groenlandicum Oeder, Labrador tea, reaches its southeastern distributional limit in Concord, Mass. It was first collected by Thoreau in 1858, subsequently regarded as extirpated by Richard Eaton in 1974, and rediscovered by Ray Angelo in 1978. Angelo has since found it in two more Concord locations.

Original artwork by Josephine Ewing.
A NEW SPECIES OF *PHYLLANTHUS* (EUPHORBIACEAE) FROM THE CAYMAN ISLANDS

**Grady L. Webster and George R. Proctor**

**ABSTRACT**

*Phyllanthus caymanensis* Webster & Proctor is described from specimens collected in the Cayman Islands. This species resembles Mesoamerican species such as *P. mevaughii* and *P. mocinianus* rather than any of the West Indian taxa of sect. *Nothoclema*. It is the first endemic species of sect. *Nothoclema* recorded from the West Indies.

Key Words: Euphorbiaceae, *Phyllanthus*, West Indies

In the revision of the West Indian species of *Phyllanthus*, Webster (1957) recorded only 2 species of sect. *Nothoclema*: the widespread *P. acuminatus* Vahl, and *P. subglomeratus* Poir. in the Lesser Antilles. It was therefore a distinct surprise when the junior author discovered a third species in the Cayman Islands. Although it is very similar in aspect to the Mesoamerican *P. mocinianus* Baillon, the Cayman plant clearly represents a previously undescribed species.

*Phyllanthus caymanensis* Webster & Proctor, *sp. nov.*, ab aliis speciebus sect. *Nothoclemae* differt ramulis glabris simpliciter pinnatifloribus, foliis ovatis subacutis conspicue venosis, antheris compressis subacutis, pollinis grana striato-reticulata.

Glabrous shrub c. 2.5 m high; twigs terete, 1–2.5 mm thick, greyish. Cataphylls ± scarious, indurate, subpersistent; stipules triangular-ovate, c. 1.2–1.5 mm long and 1.2 mm broad; blade lanceolate, c. 1–1.2 mm long, narrower. Deciduous branchlets all simple (pinnatiflorum), 3–7 cm long, with 6–10 nodes; axes greenish, angled, slender (less than 1 mm thick). Leaves with stipules
Figure 1. Flowers of *Phyllanthus caymanensis*. A. Staminate flower. B. Pistillate flower.
lanceolate, acuminate, becoming scarios and subpersistent, 0.8–1 mm long; petioles 1–2 mm long; blades chartaceous, ovate, obtusely to acutely pointed at tip, obtusely rounded to slightly subcordate at base, mostly 1.5–2.7 cm long, 1.2–2.1 cm broad, above olive green (paler beneath), with midrib, major lateral veins (c. 5–7 on a side) and veinlet reticulum distinctly prominulous (on both faces); margins plane.

Monoecious; cymes axillary on branchlets, bisexual, with one central ♀ and several lateral ♂ flowers. Staminate flowers: pedicel slender, 5–10 mm long; calyx-lobes 6, biseriate, erect, elliptic to obovate, obtuse, with paler margins, 1.3–1.7 mm long, 0.7–1.2 mm broad; disk segments 3, massive, bilobed, pitted, c. 0.6–0.8 mm across; stamens 3, filaments completely connate into a column 0.3–0.5 mm high; anthers triangular-ovate, acute or subacute, flattened, c. 0.4 mm long and 0.5 mm broad, fused by the connectives, dehiscing horizontally; pollen grains subglobose, c. 18–22 μm in diameter, 3-colporate, not syncolpate, colpi distinctly marginate, exine with even and relatively fine vermiculate ornamentation pattern. Pistillate flowers; pedicel slender (not dilated distally), becoming 8–12 mm long in fruit; calyx-lobes 6, biseriate, triangular-lanceolate, acute, 1.4–1.7 mm long; disk 3-lobed, lobes c. 0.7–0.8 mm across; ovary smooth, of 3 carpels; styles free, spreading, c. 0.4 mm long, bifid, branches slender. Capsules oblate, prominently veiny, greenish, 4–4.5 mm across; seeds 1.9–2 mm long, distinctly angled, light brownish, nearly smooth.

Type: Cayman Islands, Cayman Brac, Foster Land Distr., rocky woodland c. 0.7 mi NW of Pollard Bay, alt. c. 100 ft, 7 Aug. 1975, G. R. Proctor 35151 (JAM, Holotype). Additional collection examined: Cayman Islands, Little Cayman, sandy woodland just N of W end of the air strip, 7 Aug. 1975, G. R. Proctor 35145 (JAM).

This species represents an exciting novelty because it is the first endemic species of sect. Nothoclema to be discovered in the West Indies. In appearance, the specimen suggests a small-leaved form of the Mexican species P. mocinianus Baillon. However, in most floral characters (Fig. 1), especially the anther shape, it is closer to P. mcvaughii Webster of Chiapas and northern Central America. It differs from that species, though, in its glabrous conspicuously veined leaves, slender pistillate pedicel, and smaller seeds. Curiously, the pollen of the Cayman plant, as seen in scanning micrographs (Fig. 2), is much closer to P. mocinianus in its relatively fine
Figure 2. Pollen grains of some species of Phyllanthus sect. Notholema. A. Phyllanthus mcvaughii. B. Phyllanthus morinianus. C. Phyllanthus caymanensis. Scale bar = 4 µm.
vermiculate sculpturing than it is to the coarser, more irregular ornamentation of *P. mcvaughii* (see also figures in Webster, 1967).

Overall, *P. caymanensis* thus shares some characters with both *P. mcvaughii* and *P. mocinianus*, but is clearly distinct from either of them. It remains an intriguing phytogeographical puzzle that sect. *Nothoclema* should be represented by an endemic Antillean species only on the Cayman Islands.

ACKNOWLEDGMENTS

We wish to thank the Institute of Jamaica for loan of specimens, Dr. Steven Lynch and the Botany Department of the Smithsonian Institution for the SEM pictures of pollen, and Mr. Norman Geesing for preparing the illustrations.

LITERATURE CITED


G. L. W.
DEPARTMENT OF BOTANY
UNIVERSITY OF CALIFORNIA
DAVIS, CALIFORNIA 95616

G. R. P.
JARDIN BOTANICO NACIONAL
AVENIDA LOS TRINITARIOS
SANTO DOMINGO, REPUBLICA DOMINICANA