

## SYNOPSIS OF SUBGENUS CONAMI

Subgenus V. **CONAMI** (Aubl.) G. L. Webster, J. Arnold Arb. 37: 345. 1956; 38: 363. 1957.

*Conami* Aubl., Hist. Pl. Guian. Fr. 926, pl. 354. 1775. TYPE: *Conami brasiliensis*

Aubl. [= *Phyllanthus brasiliensis* (Aubl.) Poir.]

**Monoecious or dioecious** trees, shrubs, and herbs; branching phyllanthoid; branchlets pinnatifid or bipinnatifid; cymes axillary, usually bisexual; sepals 6, ± biseriata, entire; staminate disk segments 3 or 6; stamens 3, filaments free or connate; anthers dehiscent ± horizontally; pollen grains spheroidal, 3-colporate with diorate colpi, or porate, exine vermiculate to pilate; pistillate disk cupular; ovary 3-locular, smooth; styles free, bifid; fruit capsular; seeds smooth or colliculose.

This subgenus of 3 sections with a total of 20 species is closely related to subgenus *Kirganelia* but distinguished by the occurrence of several characters (not always present in all taxa): bipinnatifid branchlets, pollen grains with diorate colpi, an androecium of 3 connate stamens with horizontally dehiscent anthers; and staminate disk of 3 duplex segments. It is even closer to subg. *Gomphidium*, in which occur bipinnatifid branchlets, androecia of 3 connate stamens, and a staminate disk of 3 duplex segments.

### Key to the Sections

1. Branchlets often bipinnatifid; staminate disk mostly of 3 duplex segments; pollen exine vermiculate to pilate; fruit dehiscent. Sect. 1. **Nothoclema**

1. Branchlets pinnatifid; staminate disk dissected or segments confluent; pollen exine pilate; fruit dehiscent or indehiscent.

2. Fruits dehiscent; seeds verruculose; pistillate disk dissected; herbs with leaf blades rounded to acute at apex. Sect. 2. **Apolepis**

2. Fruits indehiscent; seeds smooth; pistillate disk entire; shrubs or trees with leaf blades acuminate. Sect. 3. **Hylaeanthus**

Sect. V. 1. **Nothoclema** G. L. Webster, Contr. Gray Herb. 176: 56. 1955; J. Arnold Arb.

38: 363. 1957. *Phyllanthus acuminatus* Vahl

This section of 9 species has an extraordinary amount of diversity in pollen (Webster & Carpenter, 2001), from 3-colporate grains with vermiculate sculpturing to porate grains with pilate sculpturing. Species with vermiculate sculpturing, such as *Phyllanthus anisobus* and *P. mocinianus*, are close to subgenus *Gomphidium* except for the diorate colpi.

SPECIES INCLUDED: NORTH AMERICA & SOUTH AMERICA: *Phyllanthus acuminatus* Vahl, *P. anisobus* Müll. Arg., *P. micrandrus* Müll. Arg. MEXICO & CENTRAL AMERICA: *P. mcvaughii* G. L. Webster, *P. mocinianus* Baillon. WEST INDIES: *P. caymanensis* G. L. Webster & Proctor. SOUTH AMERICA: *P. brasiliensis* (Aubl.) Poir., *P. graveolens* Kunth, *P. pavonianus* Baillon.

Sect. V.2. **Apolepis** G. L. Webster, J. Arnold Arb. 38: 371. 1957. TYPE: *Phyllanthus orbiculatus* Rich.

Monoecious annual (or sometimes perennial) herbs; branchlets pinnatifid; cymules bisexual; sepals 6; disk segments 6 in both sexes; stamens 3, filaments free; anthers emarginate, dehiscing horizontally; pollen grains spheroidal, pantoporate, exine pilate; styles free, bifid; fruits capsular; seeds verruculose.

This monotypic section includes only a single variable species that resembles species of subg. *Phyllanthus*. The pollen grains, however, are utterly different from any in that subgenus, and quite typical for subgenus *Conami*.

Sect. V.3. **Hylaeanthus** G. L. Webster, sect. nov.

Monoecious or dioecious trees or shrubs; branchlets pinnatifid, usually subtended by reduced leaves (but generally not by cataphylls); flowers in axillary unisexual or bisexual cymules (brachyblasts); sepals 6 (rarely 5), usually biseriolate; disk of discrete or confluent segments; stamens 3, filaments free or connate; anthers dehiscing horizontally or obliquely; pollen grains spheroidal, porate, exine pilate; ovary 3—5-locular, styles free or connate, bifid or unlobed; fruits indehiscent, baccate; seeds smooth, ± compressed.

This section includes 8 species that are all South American except for *Phyllanthus skutchii* in Costa Rica. Most species of sect. *Hylaeanthus* are found in Amazonian floodplain rain forests, except for *P. bernardii* in montane forests of Venezuela, and some populations of *P. attenuatus*. Species of sect.

*Hylaeanthus* are often similar in aspect to species in sect. *Brachycladus* (subg. *Xylophylla*), and are often confused with them in herbaria. The capsular fruits and distinctive pollen of sect. *Hylaeanthus* indicate that the resemblance is entirely due to convergence.

SPECIES INCLUDED: NORTH AMERICA (Costa Rica): *Phyllanthus skutchii* Standl. SOUTH AMERICA: *P. acrensis* G. L. Webster, *P. attenuatus* Miq., *P. bernardii* Jabl., *P. kubitzkii* G. L. Webster, *P. madeirensis* Croizat, *P. manausensis* W. A. Rodrigues, *P. prancei* G. L. Webster.