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**Phylogenetic relationships, systematics, and biology of the species of *Amorbia*  
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EUGENIE PHILLIPS-RODRÍGUEZ & JERRY A. POWELL



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## Phylogenetic relationships, systematics, and biology of the species of *Amorbia* Clemens (Lepidoptera: Tortricidae: Sparganothini)

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## ABSTRACT

The systematics of the New World genus *Amorbia* Clemens, 1860, is revised. The genus ranges from Brazil through Central America, the Caribbean, Mexico, southeast and western United States and northeastern and southwestern Canada. Greatest species richness is found in middle elevations (500-1500 m) in Central and South America. Twenty-nine species are treated, 13 of which are described as new: *A. monteverde* (Puntarenas, Costa Rica), *A. rhombobasis* (Guanacaste, Costa Rica), *A. cordobana* (Veracruz, Mexico), *A. cocori* (Puntarenas, Costa Rica), *A. cacao* (Guanacaste, Costa Rica), *A. catarina* (Santa Catarina, Brazil), *A. dominica* (Dominica), *A. knudsoni* (Texas, U.S.A.), *A. potosiana* (Nuevo León, Mexico), *A. chiapas* (Chiapas, Mexico), *A. santamaria* (Quetzaltenango, Guatemala), *A. curitiba* (Paraná, Brazil), and *A. stenoalvae* (Tamaulipas, Mexico). Based on a phylogenetic analysis, five species previously included in *Amorbia* are excluded and assigned to *incertae sedis*: “*Amorbia*” *depicta* Walsingham, “*Amorbia*” *elaeopetra* Meyrick, “*Amorbia*” *leptophracta* (Meyrick), “*Amorbia*” *rectilineana* (Zeller), and “*Amorbia*” *teratana* (Zeller). One species, *Amorbia revolutana* (Zeller), is raised from synonymy, and three new synonymies are proposed: *A. synneurana* Barnes & Busck with *A. cuneana* (Walsingham); *A. aequiflexa* (Meyrick) with *A. productana* (Walker); and *A. spyclocriptis* Meyrick with *A. revolutana* (Zeller). Eight informal species groups are proposed for purposes of discussing character states and their evolution: Curitiba (2 species), Productana (4 species), Humerosana (3 species), Chiapas (2 species), Colubrana (8 species), Exsectana (1 species), Rectangularis (3 species), and Decerptana (6 species). A redescription of the genus is provided; all the species treated are illustrated (including male and female genitalia where known). Data on localities are listed, and maps showing species distribution are presented. Data on biology is provided for 12 species where immatures stages are known; host plants for the species are listed. Additionally, a key to the species is provided based on male features.

**Key words:** neotropical, nearctic, systematics, phylogeny, biology, host plants, larvae

## RESÚMEN

Se presenta una revisión de la sistemática del género *Amorbia* Clemens, 1860. Este género está distribuido desde Brasil a través de Centroamérica, el Caribe, México, Sureste y Oeste de los Estados Unidos y Noreste y Suroeste de Canadá. La