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## Key to Hawaiian *Rosellinia* taxa and additions to host-fungus index

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**Abstract:** In the treatment of the Xylariaceae of the Hawaiian Islands (Ju & Rogers, 2012) *Rosellinia* collections were designated by numbers owing to the uncertainties in identifying them. The recent publication of a world monograph (Petrini, 2013) has allowed identifications or tentative identifications. A key to Hawaiian *Rosellinia* is provided, along with host and collection data. Additions and corrections to the host-fungus index are likewise provided.

**Key words:** Hawaiian Islands, host-fungus index, *Rosellinia*, Xylariaceae

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**Introduction:** In our 2012 treatment of the Xylariaceae of the Hawaiian Islands *Rosellinia* collections were assigned numbers based upon

morphological characters (Rogers & Ju, 2012). We were unable to name most of the collections because names either did not exist for them or

were unclear. In 2013 L. E. Petrini published a world monograph of *Rosellinia* that made it possible to determine a number of Hawaiian species and to provisionally determine some others. Indeed, several of Petrini's new species were based in part or wholly on Hawaiian material (Petrini, 2013). One problem in confidently determining *Rosellinia* species is that many of them are known from only single collections or at least a few. Moreover, some of the collections upon which names are based are from localities far from the Hawaiian Islands.

Finally, the variation that undoubtedly occurs within a taxon is unknown when based on one or a few collections. With these caveats, we provide a key and additional information to Hawaiian *Rosellinia*. Our key is based primarily on ascospore features. The user is referred to Petrini's monograph (2013) for complete descriptions of fungi treated here and morphologically similar species that could be considered.

1. Ascospores 80  $\mu\text{m}$  or longer, with long tapering apices ..... ***R. bunodes***
1. Ascospores much shorter, lacking long tapering apices ..... 2
  2. Ascospores over 24  $\mu\text{m}$  long, with cellular appendage and hyaline sheath ..... ***R. corticium***
  2. Ascospores usually not over 18  $\mu\text{m}$  long..... 3
3. Ascospores usually longer than 15  $\mu\text{m}$  ..... 4
3. Ascospores usually not longer than 15  $\mu\text{m}$  ..... 5
  4. Ascospores 14.5-18 x 9  $\mu\text{m}$ , with germ slit less than spore-length or  $\pm$  spore-length, with broad apices ..... ***R. hypoxyloides***
  4. Ascospores 15-18 x 9  $\mu\text{m}$ , with spore-length germ slit and acute apices ..... ***R. cf. guianae***
5. Ascospores usually longer than 12  $\mu\text{m}$  ..... 6
5. Ascospores usually not longer than 12  $\mu\text{m}$  ..... 7
  6. Ascospores 12-16 x 7.5-8  $\mu\text{m}$ , with spore-length germ slit and  $\pm$  broad apices ..... ***R. cf. indica***  
(and see also ***R. rickii***)
  6. Ascospores (13-)14-15(-16) x(6.5-)7.5-9  $\mu\text{m}$ , with spore-length germ slit and with apices broad, but not rounded..... ***R. cf. griseo-cincta***  
(and see also ***R. albocincta***)
7. Ascospores longer than 9  $\mu\text{m}$  ..... 8
7. Ascospores not longer than 9  $\mu\text{m}$ ..... 10
  8. Ascospores 9.5-10.5 x (4.5-)5(-6)  $\mu\text{m}$ , with slightly less than spore-length germ slit. Apical ascus ring not bluing in iodine..... ***R. rogersii***
  8. Apical ascus ring bluing in iodine, with less than spore-length germ slit ..... 9

9. Ascospores light brown to brown 9.5-12 x 6-6.5  $\mu\text{m}$ , with broad ends, on white, cream-colored to light brown subiculum ..... ***R. mammoidea***
9. Ascospores dark brown, 9-10.5 x 4.5-5(-6)  $\mu\text{m}$ , with broad apices, often on yellow or cream subiculum .  
..... ***R. subiculata***
10. Ascospores 7.5-9 x 3.5-4.5  $\mu\text{m}$ , with germ slit less than spore-length, with  $\pm$  broad apices .....  
..... ***R. breensis***
10. Ascospores 7.5-9(-10.5) x 4.5-5(-6)  $\mu\text{m}$ , with spore-length germ slit and broad apices.....  
..... ***R. eucalypticola***

### Host and Distribution Data on Hawaiian *Rosellinia* taxa

In our treatment of Hawaiian Xylariaceae (Rogers & Ju, 2012) *Rosellinia* taxa were given number designations. This addendum to that paper gives data in the form of species. As in the previous publication the Hawaiian Islands are designated, as follows: HA=Hawaii; KA=Kauai; MA=Maui, MO=Molokai; OA=Oahu.

#### ***Rosellinia breensis*** Starb.

Hosts and Substrates: *Bambusa vulgaris*,

*Psidium guajava*, wood

Distribution: KA: Hanalei; MA: Maluhia SC

#### ***Rosellinia bunodes*** (Berk. & Broome) Sacc.

Hosts and Substrates: *Spathodea campanulata*

Distribution: HA: Onomea

#### ***Rosellinia corticium*** (Schwein.:Fr.) Sacc.

Hosts and Substrates: wood

Distribution: MA: Seven Sacred Pools

#### ***Rosellinia eucalypticola*** Henn. & E. Nym.

Hosts and Substrates: *Bambusa vulgaris*,

*Casuarina equisetifolia*, *Cecropia obtusifolia*, wood

Distribution: HA: Hilo, MacKenzie Park; KA:

Hanalei; Koke'e Park; OA: 'Aiea Trail

#### ***Rosellinia cf. griseo-cincta*** Starb.

(see also ***R. albocincta*** Petch)

Hosts and Substrates: *Erythrina sandwicensis*,

*Sapindus saponaria*, wood

Distribution: HA: Bird Park, Hilo

#### ***Rosellinia cf. guianae*** L. E. Petrini

Hosts and Substrates: *Acacia koa*

Distribution: HA: Kipuka Ki

#### ***Rosellinia hypoxylodes*** (Henn.) Sacc. & D. Sacc.

Hosts and Substrates: wood

Distribution: HA: Pahala area

#### ***Rosellinia cf. indica*** Dargan & K. S. Thind (see also ***R. rickii*** Bres.)

Hosts and Substrates: *Aleurites moluccana*,  
*Sapindus saponaria*

Distribution: HA: Bird Park; OA: Manoa

#### ***Rosellinia mammoidea*** (Cooke) Sacc.

Hosts and Substrates: wood

Distribution: HA: Bird Park

#### ***Rosellinia rogersii*** L. E. Petrini

Hosts and Substrates: *Eucalyptus* sp.

Distribution: OA: 'Aiea Trail

#### ***Rosellinia subiculata*** (Schwein.:Fr.) Sacc.

Hosts and Substrates: *Metrosideros*

*polymorpha*, wood

Distribution: HA: Kalopa, Kona

### ADDITIONS TO HOST-FUNGUS INDEX

In the year following our publication on Xylariaceae of the Hawaiian Islands (Rogers & Ju, 2012) some additional collections have been examined and some taxonomic and/or nomenclatorial additions made to previously cited taxa. The following is a list of taxa to

supplement and complement the Host-Fungus Index of the 2012 paper.

**Acacia koa**--*Xylaria* cf. *corniformis*  
**Acacia mearnsii**--*Biscogniauxia capnodes*;  
*Hypoxylon placentiforme*; *Hypoxylon ravidiroseum*  
**Albizia** sp.--*Xylaria* cf. *telfairii*  
**Aleurites moluccana**--*Hypoxylon monticulosum*; *Nemania chrysoconia*;  
*Nemania bipapillata*  
**Alnus nepalensis**--*Xylaria berteri*  
**Angiosperm wood**--*Hypoxylon crocoplepum*; *Xylaria berteri*  
**Casuarina equisetifolia**--*Xylaria tuberoides*  
**Citrus** sp.--*Daldinia eschscholzii*  
**Decayed wood**--*Nemania abortiva*; *Xylaria moelleroclavus*; *Biscogniauxia citriformis*  
**Eucalyptus robusta**--*Annulohypoxylon moriforme*  
**Eucalyptus** sp.--*Biscogniauxia capnodes*;  
*Biscogniauxia citriformis*  
**Eugenia jambos**--*Xylaria moelleroclavus*

**Eugenia malaccensis**--*Kretzschmaria sandvicensis*  
**Fraxinus uhdei**--*Biscogniauxia capnodes*;  
*Xylaria berteri*  
**Metrosideros polymorpha**--  
*Annulohypoxylon nitens*; *Nemania diffusa*;  
*Xylaria anisopleura*; *Xylaria cubensis*  
**Osmanthus sandwicensis**--*Nemania* cf. *bipapillata*  
**Pisonia brunoniana**--*Hypoxylon parksianum*  
**Psidium guajava**--*Nemania immersidiscus*  
**Sapindus saponaria**--*Nemania angusta*;  
*Xylaria berteri*  
**Trema orientalis**--*Xylaria* cf. *tuberoides*

#### Correction of a collection area citation

In the original publication (Rogers & Ju, 2012) a collection location on the island of Hawaii was given as **Kopaka Park**. This should be corrected to **Kalopa State Recreation Area**.

#### Literature cited:

Petrini, L. E. 2013. *Rosellinia*-a world monograph. Bibliotheca Mycologica 205. J. Cramer

Rogers, J. D. and Y.-M. Ju. 2012. The Xylariaceae of the Hawaiian Islands. North American Fungi 7(9) 1-35. <http://dx.doi.org/10.2509/naf2012.007.009>