

# Arthropods Associated with *Serianthes nelsonii*

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September 10, 2017

- Acari
  - unidentified family
    - \* unidentified species
      - Listed in [1] as present on mature trees in Rota and Guam.
- Coleoptera [GBIF 1470]
  - Tenebrionidae [GBIF 7857]
    - \* unidentified species
      - Listed in [1] as 'Alleculidae sp. (?)'. Alleculidae is a synonym of Tenebrionidae. Present on mature trees in Rota.
  - Chrysomelidae [GBIF 7780]
    - \* *Rhyparida* sp. [GBIF 3259981]
      - invasive G G
      - Listed in [1] as present on mature trees and potted seedlings in Guam. Species known to be historic introductions to the Mariana Islands.
  - Curculionidae [GBIF 4239]
    - \* *Miocalles guamae* (Zimmerman 1957) [2]
      - Listed in Wiles et al. 1996 as *Myocallis guamensis*. This appears to be a misspelling of *Miocalles guamae*.
      - native R
    - \* *Miocalles spinifer* (Zimmerman 1957) [2]
      - Listed in Wiles et al. 1996 as *Myocallis spinifer*. This appears to be a misspelling of *Miocalles guamae*
      - native R
    - \* unidentified species

- Listed in [1] as present on
- unknown R
- \* *Xylosandrus compactus* [GBIF 8636797]
  - In 2014, US Forest Service funded Ruddy Estoy, Guam Department of Agriculture, Division of Forestry and Soil Resources, to install and monitor bark beetle and woodborer detection traps as part of the US Forest Service Early Detection/ Rapid Response program. Twelve bark beetle species were identified from this effort, 5 are apparently new island records. Impacts of these new bark beetles on Guam's forests are unknown. However, one of the species first detected in 2014, *Xylosandrus compactus* [GBIF 8636797], the black twig borer, was found in 2015 attacking *Serianthes nelsonii* saplings in the Guam Plant Extinction Prevention Program (GPEPP) nursery operated by Dr. James McConnell at the University of Guam (Figure 7). *S. nelsonii* is a critically endangered plant with only a single mature tree remaining on Guam. GPEPP is propagating *S. nelsonii* in an attempt to save this species and other rare, native forest plants. Attacks by invasive species, many of which are recent arrivals, are hampering GPEPP's conservation efforts, both in the nursery and in out-plantings. from [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fseprd509273.p](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd509273.pdf) (2015 highlite[3]s)
- Elateridae [GBIF 7825]
  - \* unidentified species
    - Listed in [1] as present on
    - unknown R
- Hemiptera [GBIF 809]
  - Aphididae [GBIF 3042]
    - \* *Aphis craccivora* [GBIF 8414954]
      - Listed in [1] as present on
      - invasive G
  - Aphrophoridae [GBIF 3764]
    - \* *Lallemandana phalerata* [GBIF 2016693]
      - native R
      - Listed in [1] as present on
  - Coccidae [GBIF 6963]
    - \* *Saissetia* sp. [GBIF 2091083]
      - Listed in [1] as present on

- unknown G
- Diaspididae [\[GBIF 4521\]](#)
  - \* *Pseudaonidia duplex* [\[GBIF 8860173\]](#)
    - Camphor scale, *Pseudaonidia duplex* [\[GBIF \]](#), was detected on Guam in September 2014. This armored scale was found infesting seedlings of the endangered tree *Serianthes nelsonii* growing in a nursery at the University of Guam. This is the first record for this insect from Guam and the rest of Micronesia and the first report of it attacking this host. The scale likely originates from Asia and was reported from Hawaii and California in 1908. From [https://www.fs.fed.us/foresthealth/fhm/fhh/fhh\\_14/PI\\_FHH](https://www.fs.fed.us/foresthealth/fhm/fhh/fhh_14/PI_FHH).
- Margarodidae [\[GBIF 8651\]](#)
  - \* *Steatococcus samaraius* [\[GBIF 2079883\]](#)
    - Listed in [\[1\]](#) as present on
    - invasive RG G
- Membracidae [\[GBIF 7889\]](#)
  - \* *Leptocentrus taurus* [\[GBIF 2022062\]](#)
    - Listed in [\[1\]](#) as present on
    - native R
- Pseudococcidae [\[GBIF 4534\]](#)
  - \* *Dysmicoccus brevipes* [\[GBIF 7672713\]](#)
    - invasive G
  - \* *Dysmicoccus neobrevipes* [\[GBIF 2092833\]](#)
    - Listed in [\[1\]](#) as present on
    - invasive G
  - \* *Ferrisia virgata* [\[GBIF 2093900\]](#)
    - Listed in [\[1\]](#) as present on
    - unknown RG
  - \* *Planococcus citri* [\[GBIF 7920517\]](#)
    - Listed in [\[1\]](#) as present on
    - invasive G
- Tropiduchidae [\[GBIF 2232\]](#)
  - \* *Kallitaxila crini* [\[GBIF 8142925\]](#)
    - Listed in [\[1\]](#) as present on
    - invasive G
- Isoptera [\[GBIF 999\]](#)

- unidentified family
  - \* unidentified species
    - Listed in [1] as present on
    - unknown G
- Lepidoptera [GBIF 797]
  - Geometridae [GBIF 6950]
    - \* unidentified species 1
      - Listed in [1] as present on
      - unknown R
    - \* unidentified species 2
      - Listed in [1] as present on
      - unknown R
    - \* unidentified species 3
      - Listed in [1] as present on
      - unknown G
    - \* unidentified species 4
      - Listed in [1] as present on
      - unknown G
  - unidentified family (micolepidoptera)
    - \* unidentified species
      - Listed in [1] as present on
      - unknown G
  - Noctuidae [GBIF 7015]
    - \* unidentified species
      - Listed in [1] as present on
      - unknown R
  - Pieridae [GBIF 5481]
    - \* *Eurema blanda* [GBIF 5137808]
      - Listed in [1] as present on
      - native RG ???
- Orthoptera [GBIF 1458]
  - Tettigoniidae [GBIF 3991]
    - \* unidentified species
      - See [3]

## References

- [1] Wiles GJ, Schreiner IH, Nafus D, Jurgensen LK, Manglona JC. The status, biology, and conservation of *Serianthes nelsonii* (Fabaceae), an endangered Micronesian tree. *Biological Conservation*. 1996;76(3):229–239. Available from: [https://www.researchgate.net/profile/Gary\\_Wiles/publication/223271355\\_The\\_status\\_biology\\_and\\_conservation\\_of\\_Serianthes\\_nelsonii\\_Fabaceae\\_an\\_endangered\\_Micronesian\\_tree/links/0deec539e5fa7663d5000000/The-status-biology-and-conservation-of-Serianthes-nelsonii-Fabaceae-an-endangered-Micronesian-tree.pdf?origin=publication\\_list&ev=srch\\_pub\\_xdl](https://www.researchgate.net/profile/Gary_Wiles/publication/223271355_The_status_biology_and_conservation_of_Serianthes_nelsonii_Fabaceae_an_endangered_Micronesian_tree/links/0deec539e5fa7663d5000000/The-status-biology-and-conservation-of-Serianthes-nelsonii-Fabaceae-an-endangered-Micronesian-tree.pdf?origin=publication_list&ev=srch_pub_xdl).
- [2] Zimmerman EC. Miocalles and Microcryptorhynchus. *The Coleopterists' Bulletin*. 1957;11:79–94. Available from: <http://hbs.bishopmuseum.org/fiji/pdf/zimmerman1957.pdf>.
- [3] Moore A. Insects Attacking *Serianthes nelsonii*. caca. 2014 Apr;Bibtex: 3351. Available from: <https://github.com/aubreymoore/presentations/raw/master/SerianthesInsectPests/SerianthesInsectPest.pdf>.
- [4] Ares MA, Meneses N, Smith A, Moore A, Benford R. Molecular Identification of a Lepidopteran Herbivore on a Critically Endangered Tree. *Northern Arizona Undergraduate Symposium 2015*; 2015. Available from: [http://guaminsects.net/anr/sites/default/files/SerianthesHerbivoreAres2015final\(1\).pdf](http://guaminsects.net/anr/sites/default/files/SerianthesHerbivoreAres2015final(1).pdf).
- [5] Moore A. Caterpillar defoliating *Serianthes nelsonii* saplings | Insects of Guam; 2014. Available from: <http://guaminsects.myspecies.info/caterpillar-defoliating-serianthes-nelsonii-saplings>.
- [6] Moore A. *Serianthes nelsonii* saplings damage by tettigoniid oviposition | Insects of Guam; 2011. Available from: <http://guaminsects.myspecies.info/serianthes-nelsonii-saplings-damage-tettigoniid-oviposition>.
- [7] Recovery plan for *Serianthes nelsonii*. US Fish and Wildlife Service; 1994. Available from: <https://sablan.house.gov/sites/sablan.house.gov/files/documents/2.%20Serianthes%20recovery%20plan.pdf>.