

An inventory of weevils inhabiting the State Forest of Maricao, western Puerto Rico (Coleoptera: Curculionoidea)



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Introduction

The beetle fauna of Puerto Rico is not well documented, in spite of the Island's moderate biodiversity. This is particularly true for the weevils (Curculionoidea), the most diverse lineage of herbivorous beetles, for which only 98 species have so far been reported from Puerto Rico.¹ At least twice that number is expected to occur on the Island, including many new species already present in research collections.

Maricao State Forest

Maricao State Forest is located on the western-most edge of the Central Cordillera (Fig. 1). With an extension of 4,150 ha, it is the second largest area protected under the Commonwealth system, and likely the most ecologically variable (Fig. 2). Estimates of angiosperm diversity range from 850-1,100 species.² High rates of endemism are evident in many insect groups including the Cerambycidae.³



Figure 1. Maricao State Forest, Puerto Rico.



Figure 2. Aspect of the Maricao State Forest Watershed, ca. 850 m. Vegetations zones include lower montane wet forest, subtropical wet forest, and subtropical moist forest on dry slopes.

Objectives and methods

The Maricao weevil inventory involves a synthesis of previous collecting and identification efforts (CWOB) and ongoing work covering all habitat types (NMF, since March 2006). Collecting methods include beating plants, barking trees, Berlese samples, Malaise trapping, UV and Hg lights, as well as flight intercept traps (starting January 2007). Host plant information is recorded whenever possible. The new specimens are housed in the UPR Mayagüez Insect Collection (UPRM). More than 10 UPRM students have so far participated in the sampling, processing, and identification of weevils and other insect specimens.

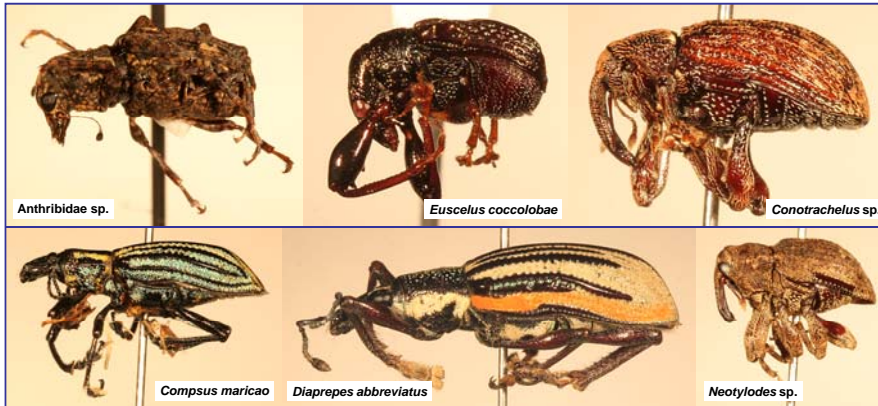
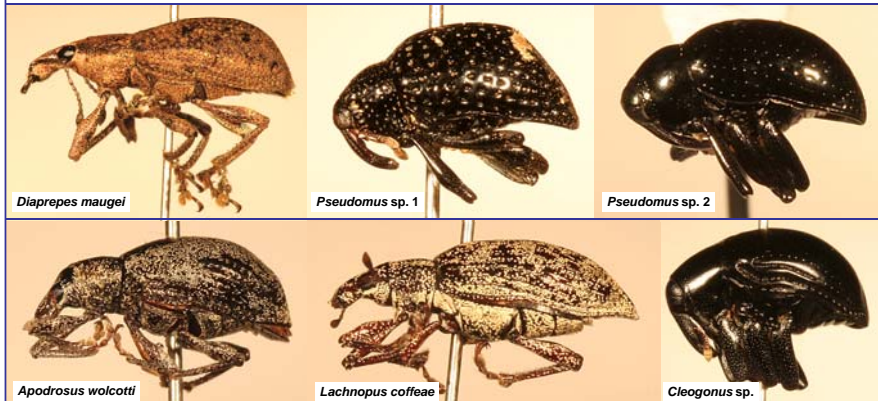


Table 1. Working list of weevil taxa recorded for the Maricao State Forest.⁴

Anthribidae	Gen. spp. 1 to 8	Curculioninae	<i>Phyllotrox albidus</i> (Suffrian)
Apionidae	<i>Apion martinexi</i> Marshall		<i>Phyllotrox</i> sp.
Atelabidae	<i>Euscelus coccolobae</i> (Wolcott)		<i>Smicronyx</i> sp.
Brentidae	<i>Belophorus maculatus</i> (Olivier)	Entiminae	<i>Apodrosus wolcotti</i> Marshall
	<i>Paratrachelizus linearis</i> Suffrian		<i>Compsus maricao</i> Wolcott
Curcul.: Baridinae	<i>Geraeus montanus</i> Wolcott		<i>Diaprepes abbreviatus</i> (Linnaeus)
	<i>Peridinetus roeselii</i> (Boheman)		<i>Diaprepes maugei</i> (Boheman)
	<i>Peridinetus signatus</i> Rosenschold		<i>Exophthalmus quinquecimpunctatus</i> (Olivier)
	<i>Rhaptinus torquatus</i> (Olivier)		<i>Exophthalmus roseipes</i> (Chevrolat)
Cossoninae	<i>Cossonus</i> sp.		<i>Lachnopus coffeae</i> subsp. <i>montanus</i> Marshall
	<i>Drytribus mimeticus</i> Horn		<i>Lachnopus curvipes</i> (Fabricius)
	<i>Stenotrupis acicula</i> Wollaston		<i>Lachnopus</i> sp.
Cryptorhynchinae	<i>Acalles</i> sp.		<i>Polydacris depressifrons</i> Boheman
	<i>Cleogonus</i> sp.	Molytinae	<i>Anchonus sullius</i> (Fabricius)
	<i>Neotyloides</i> spp. 1 to 4		<i>Anchonus</i> spp. 1 to 2
	<i>Pseudomopsis cucubano</i> Wolcott		<i>Conotrachelus</i> sp.
	<i>Pseudomus semicribatus</i> Boheman	Platypodinae	<i>Platypus rugulosus</i> Chapuis
	<i>Pseudomus</i> spp. 1 to 2	Scolytinae	<i>Ambrosiodmus lecontei</i> Hopkins
	Gen. spp. 1 to 12		<i>Xyloborus grenadensis</i> Hopkins
Curculioninae	<i>Anthonomus pulicarius</i> Boheman	Trypetidinae	<i>Nanus uniformis</i> Boheman
	<i>Anthonomus</i> spp. 1 to 3	Dryophthoridae	<i>Dryophthorus</i> sp.
	<i>Micromyrmex pulicarius</i> (Boheman)		<i>Metamasius hemipterus</i> (Linnaeus)
	<i>Penestes</i> sp.		<i>Sphenophorus venatus</i> subsp. <i>vestitus</i> Chittenden



Results and discussion

The working list of Maricao weevils includes 70 species, i.e. 71.4% of the diversity previously reported for the Island (Table 1). The Anthribidae, Entiminae, and Cryptorhynchinae are particularly well represented. The latter group is the most conspicuous yet also the least understood with respect to its taxonomy and life history. New and possibly endemic species are also evident in the Molytinae: Anchonini (*Anchonus* Schoenherr) and Dryophthoridae (*Dryophthorus* Germar). Although premature, the inventory underscores Maricao's special position within Puerto Rico's ecosystem network.

Future directions

The sampling efforts at Maricao will continue throughout 2007. Future taxonomic research will focus on the Entiminae and the complex cryptorhynchine genera, and will involve UPRM student projects. A gradual expansion of the inventory to the adjacent lower elevation State Forests of Susúa and Guánica is underway, and will facilitate comparative faunistic analyses. All identified specimens will be entered into a *Specify* database⁵ system recently installed for the UPRM insect collection. A website with images and natural history information will be linked from the URL: <http://academic.uprm.edu/~franz/>

Call for specialist collaborators

Pending proper arrangement, beetles and other insect specimens produced during the Maricao inventory are available for loan to taxonomic specialists. For further detail please contact NMF at franz@uprm.edu

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