DNA Barcoding

Tuesday, April 28, 2015

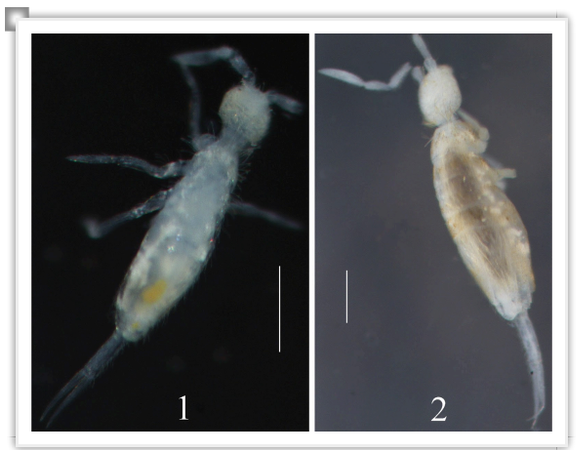
Discoveries of the week #36

Liolaemus scorialis, Liolaemus zabalai

The elongatus-kriegi complex is one of the most diverse clades of the Liolaemus (sensu stricto) subgenus of lizards. There are currently 29 species recognized in this group distributed between Chile and Argentina. Based on molecular evidence, there seem to be five main clades nested within this complex: the elongatus, leopardinus, kriegi, petrophilus and punmahuida clades. Liolaemus buergeri and L. kriegi, both of the kriegi clade, were believed to inhabit the surroundings of the Laja Lagoon, in the Biobío Region of Chile. Moreover, this Chilean population of L. kriegi was recently recognized as an undescribed taxon called "Liolaemus sp. A" based on molecular phylogenetics. In this work, we studied these two populations of the Laja Lagoon and provided the morphological diagnosis to describe them as two new species: L. scorialis sp. n. and L. zabalai sp. n., previously considered L. buergeri and "L. kriegi/Liolaemus sp. A" respectively. Additionally, we identified another population of L. scorialis in the vicinity of La Mula Lagoon in the Araucanía Region of Chile. Liolaemus scorialis differs from almost all of the species of the elongatus-kriegi complex by its considerably smaller size. Nevertheless, without molecular data we cannot assign it to any particular subclade. Liolaemus zabalai belongs to the kriegi clade based on published molecular phylogenies. Finally, we provide some natural history data on both species and we document for the first time the presence of L. neuquensis in Chile from a museum specimen from La Mula Lagoon.

Two new lizard species from Chile that seem to like high altitude environments. The first species was named after the habitat, which is composed of accumulations of igneous rocks from the Antuco Volcano, called "scoria" from the Greek "skoria". The second new species is named after Patricio Zabala, collection manager of the "Colección de Flora y Fauna Patricio Sánchez Reyes, Pontificia Universidad Católica de Chile"
no DNA Barcodes (but there is cytb data available - sigh)

Coecobrya sanmingensis, Coecobrya qinae



Two new Coecobrya species, which were newly collected in 2014, are described from China. Coecobrya sanmingensis sp. n. from southeast China (Fujian) is the fourth 1+1 eyed species in the genus; it can be distinguished from other three species by the ciliate chaetae X and X2-4 on the ventral side of head, the abundant chaetae on the trochanteral organ, a large outer tooth on the unguiculus, the absence of smooth manubrial chaetae, and the dorsal chaetotaxy. Coecobrya qinae sp. n. from southwest China (Yunnan) is characterized by paddle-like S-chaetae of Ant. III organ, ciliate chaetae X, X2 and X4 posterior to labium, medial macrochaetae on the mesothorax, and 5+5 central and 2+2 lateral macrochaetae on the fourth abdominal segment. An updated key to the Chinese species of Coecobrya is given.

Two new springtail species from China. One named after the type locality and the other one after the collector.
no DNA Barcodes

Oobius minusculus, Oobius whiteorum

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Dirk Steinke

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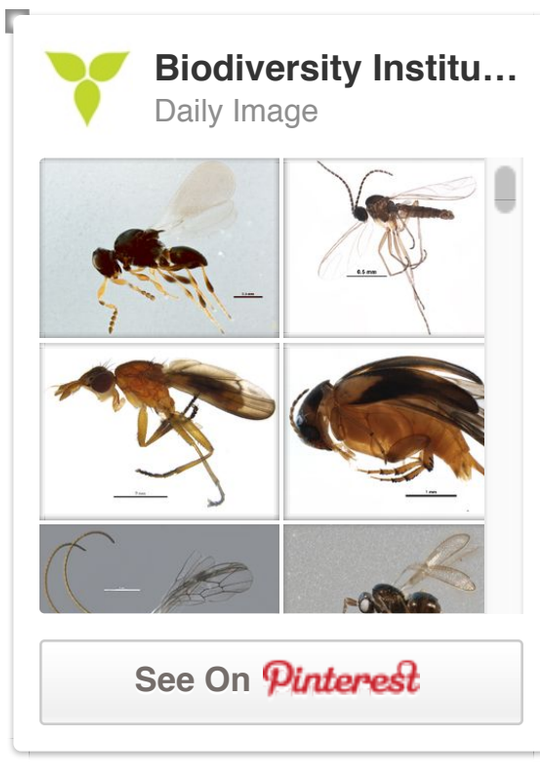

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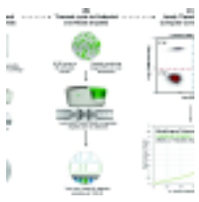

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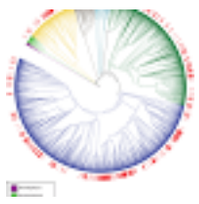
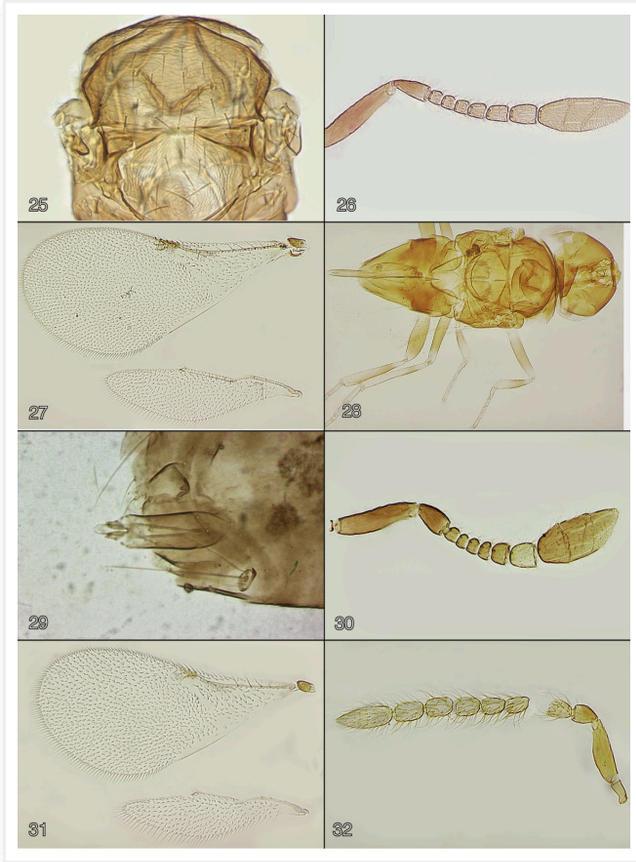


Mapping rainforest biodiversity

Australian rainforests have been fragmented due to past climatic changes and more recently landscape

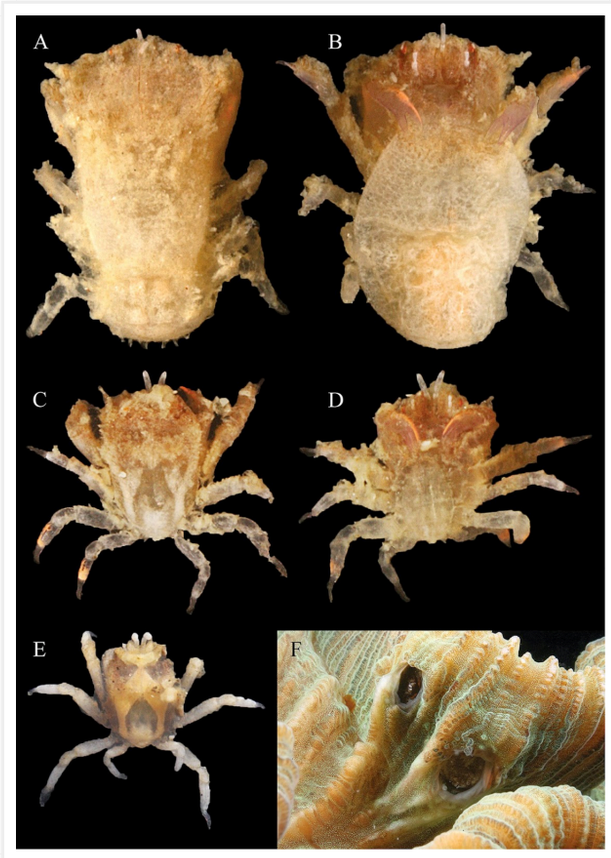
Oobius Trjapitzin (Hymenoptera, Encyrtidae) species are egg parasitoids that are important for the biological control of some Buprestidae and Cerambycidae (Coleoptera). Two species, O. agrili Zhang & Huang and O. longoi (Siscaro), were introduced into North America for classical biocontrol and have successfully established. Two new native North American species that parasitize eggs of Agrilus spp. (Buprestidae) are described and illustrated from the USA: O. minusculus Triapitsyn & Petrice, sp. n. (Michigan), an egg parasitoid of both A. subcinctus Gory on ash (Fraxinus spp.) and A. egenus Gory on black locust (Robinia pseudoacacia L.) trees, and O. whiteorum Triapitsyn, sp. n. (Pennsylvania), an egg parasitoid of A. anxius Gory on European white birch (Betula pendula Roth). A taxonomic key and notes on the Nearctic native and introduced Oobius species are also included.



The name of the first new species parasitoid wasp refers to its small size. The second new species is named in honor of good friends of the author's family.
no DNA Barcodes

Lithoscaptus semperi

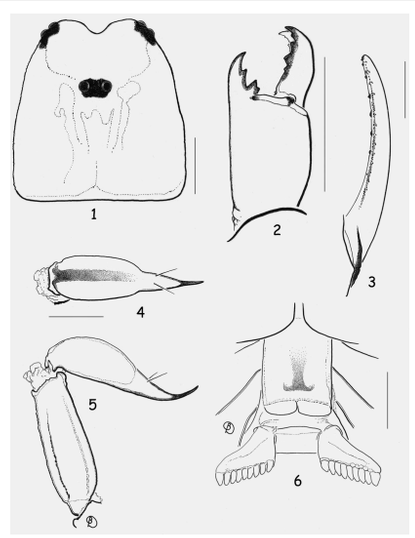
A new species of gall crab is described from the free-living stony coral Trachyphyllia geoffroyi. Specimens were collected during field work in Lembeh Strait (Indonesia) and off Kudat (Malaysian Borneo). This new species, here named Lithoscaptus semperi sp. n., is the ninth species assigned to the genus. It can be separated from its congeners by not having the internal orbital angle extending beyond the external orbital angle, and by the stout female P2 merus with prominent distomesial projection. In addition, the carapace surface appears smooth, despite having small tubercles on the anterior half, and is without noticeable spines, other than those on the frontal margin. The distinctive carapace pattern in life is a diagnostic character in male specimens.



This new crab species was named after the German naturalist Carl Gottfried Semper (1832–1893), who was the first to mention gall crabs occurring in the coral genus *Trachyphyllia*.
DNA Barcodes available

Alloscorpiops troglodytes

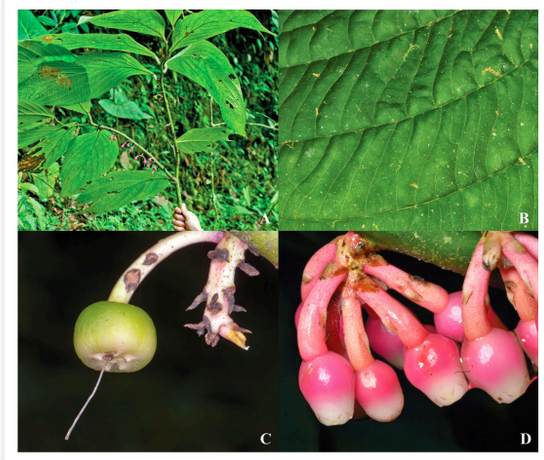
Among the genera of the subfamily Scorpiopinae Kraepelin, 1905 Alloscorpiops remains rather discrete. Only recently new species were added to this genus, increasing its number from two to five. Therefore, species of Alloscorpiops remain rare. One remarkable new species, Alloscorpiops troglodytes sp. n., is described on the basis of a single male specimen collected inside a cave from Song Thanh Nature Reserve, Cha Vanh Commune, Nam Giang District in Vietnam. The new species presents most features exhibited by scorpions of the genus Alloscorpiops, but it is characterized by reduced size, slender body and elongated pedipalps. This new scorpion taxon represents the third species of Scorpiopinae discovered in a cave system, and may be another endemic element in the fauna of Vietnam.



This species was found in a cave in Song Thanh Nature Reserve in Central Vietnam.The specific name refers to this origin.
no DNA Barcodes

Psammisia pinnata, Psammisia pseudoverticillata, Psammisia sophiae, Satyria orquidiensis, Satyria pterocalyx

he inventory of the vascular plants of one of the richest and least studied floras, the Andean and Chocó regions of northwestern Colombia, targets Las Orquídeas National Park. As a result of field trips to areas never before collected, several epiphytic and small terrestrial shrubs in the family Ericaceae have been discovered in the Park's humid forests. Five new, morphologically remarkable species of Ericaceae (tribe Vaccinieae), are here described and illustrated. In a separate



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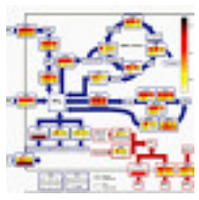

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phylogenetic analysis, Psammisia pinnata Pedraza, P. pseudoverticillata Pedraza, Satyria orquidiensis Pedraza, and S. pterocalyx Pedraza, were placed by molecular sequence data within clades of the non-monophyletic genera Psammisia and Satyria; phylogenetic evidence for the placement of P. sophiae Pedraza is still lacking. Their affinities are here discussed, along with their preliminary conservation status.

Five new species of the family Ericaceae and all have been found in Colombia. Several species have been named after leaf or stem features, one (*P. sophiae*) after the daughter of the author and another one (*S. orquidiensis*) after the type locality.
no DNA Barcodes

Posted by Dirk Steinke at 2:17 PM

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