

Beauty of the Beast

GRASSHOPPERS AND KATYDIDS

**LONG
LEGGED
BEAUTIES**



Dazzlingly colorful or wonderfully camouflaged, the tropical members of the orthopteran tribe come in all sorts of surprising shades and shapes



Pycnopalpa bicordata

Decaying-leaf-mimic katydid *Pycnopalpa bicordata*, Mindo cloud forest, Ecuador.
On the opening spread, Spiny Katydid, *Panacanthus cuspidatus*, Yasuni National Park, the Amazon, Ecuador



Copiphora sp.

Rhinoceros Katydid (*Copiphora sp.*), Mindo cloud forest, Ecuador

TEXT BY ANDREA FERRARI
PHOTOS BY ANDREA & ANTONELLA FERRARI

I must admit - from the start - that we are not madly enamored of grasshoppers and katydids the way we are of - say - praying mantises. There's something undeniably grotesque in their body proportions - it's quite difficult appreciating those jackknife hind legs and how they work - and most grasshoppers and katydids (beware - there is a difference!) will readily disappear with a startling jump if approached too closely, rather than sitting there and watching you with the eerily detached, malignant interest shown by a hungry praying mantis. However, the more we observe them during our frequent trips to remote tropical rainforests - especially in those of Central and South America - the more we are learning to like them. True, most of them do not show the supreme grace shown by mantises, and prove to be rather more challenging as camera subjects with their chunky bodies and folded hind legs - but I have to add that the array of thorns and spines shown by several species, the dazzling technicolored hues adorning others and above all the stupefying display of camouflage and mimicry shown by even others often leaves us speechless. Believe me - there are few rainforest sights as stupefying as that offered by a displaying Amazon flasher or

Peacock katydid *Pterachroza ocellata* (see *ANIMA MUNDI - Adventures in Wildlife Photography Issue 9, January 2013*) or as startling as the one shown by a leaf-mimic katydid such as *Roxelana* or *Typophyllum* when one sees a big green or dry leaf - complete with veining, insect bites and mold spots - start sedately walking away. Yes, grasshoppers and katydids can really surprise you - and in more ways than expected, as I found out to my own expense when I tried to pick up a *Copiphora* Conehead - those shiny black mandibles can rip your skin to shreds and draw blood (besides some perfectly justified howling!). In fact, far from being the merry lettuce-chewers we imagine them to be, lots of katydids are fierce, carnivorous predators which will not shy away from catching and consuming other insects (and even small lizards and geckos, given the opportunity). The following gallery offers some interesting examples - both in the fascinating variety and in the inherent difficulty in photographing them decently - of a few members of the orthopteran tribe. Several of these are only partially identified, sometimes only by their Family name. There are so many of them that most haven't been described yet. So next time you spot one don't dismiss it - it might actually be a new species. ●



Paraphidnia sp.

Lichen-mimic Katydid *Paraphidnia* sp. (Tettigoniidae), Mindo cloud forest, Ecuador



Copiphora rhinoceros

Cone-headed Katydid *Copiphora rhinoceros*, Selva Verde Nature Reserve, Costa Rica



Steirodon sp.

Spiny katydid *Steirodon sp.*, Tambopata Reserve, rio Tambopata, Peru, Amazonia



Eumastax sp.

Monkey face Grasshopper *Eumastax sp.*, Tambopata Reserve, rio Tambopata, Peru, Amazonia



Phyllochoreia sp.

Hooded Leaf grasshopper *Phyllochoreia sp.*, the Western Ghats, the Sahyadris, India



Pterachroza ocellata

Leaf Katydid *Pterachroza ocellata* in defensive display, Yasuni National Park, Ecuador



Eumastacidae

Mating Monkeyface Grasshoppers (*Eumastacidae*), Yasuní National Park, the Amazon, Ecuador



Championica peruana

Spiny Lichen katydid *Championica peruana*, Tambopata Reserve, rio Tambopata, Peru



Pseudophyllinae

Lichen-mimic Katydid, *Pseudophyllinae*, Selva Verde Nature Reserve, Costa Rica



Orophus sp.

Leaf-mimic Katydid *Orophus sp.*, Selva Verde Nature Reserve, Rio Sarapiquí region, Heredia, Costa Rica



Helolampis sp.

Mating Acrididae grasshoppers, Yasuní National Park, the Amazon, Ecuador



Vestria sp.

Crayola katydid, *Vestria sp.* (Tettigoniidae), Yasuní National Park, the Amazon, Ecuador



Parableta sp.

Leaf-mimic katydid, *Parableta sp.*, Yasuní National Park, the Amazon, Ecuador



Colpolopha sp.

Colpolopha sp., dorsal view, Yasuni National Park, Ecuador



Pterachroza ocellata

Leaf Katydid *Pterachroza ocellata*, Yasuni National Park, the Amazon, Ecuador



Roxelana crassicornis

Leaf-mimic katydid *Roxelana crassicornis*, Tambopata Reserve, rio Tambopata, Peru, Amazonia



Poecilocloeus cf. lepidus

Rainbow katydid *Poecilocloeus cf. lepidus*, Tambopata Reserve, rio Tambopata, Peru, Amazonia



Omura congrua

Cryptic Leaf katydid *Omura congrua* (Pyrgomorphidae), Tambopata Reserve, rio Tambopata, Peru, Amazonia



Panacanthus cuspidatus

Spiny Katydid *Panacanthus cuspidatus* (Tettigoniidae), Yasuni National Park, the Amazon, Ecuador



Pterachroza ocellata

Flasher or Peacock Leaf-mimic katydid *Pterachroza ocellata*, Tambopata Reserve, rio Tambopata, Peru, Amazonia



Paraphidnia sp.

Lichen-mimic Katydid *Paraphidnia sp.* (Tettigoniidae), Mindo cloud forest, Ecuador



Eumastax sp.

Monkey face Grasshopper *Eumastax sp.*, Tambopata Reserve, rio Tambopata, Peru, Amazonia

A special contribution by Juan Manuel Cardona Granda,
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Homeomastax dereixi

A complex genus whose species are all externally very similar and can usually only be separated by their known ranges and quite esoteric internal genital characters. They all sport the same red bands above the knee.

TEXT AND PHOTOS
BY JUAN MANUEL CARDONA GRANDA

Most people tend to think of grasshoppers as green or brown little bugs rarely worth a second look. But in the neotropics they can be neither monochrome nor small. However, many of the most incredible species are rarely photographed, despite being relatively common. The reasons for this are many: grasshoppers are skittish, wary creatures ready to jump away when a stooping photographer gets close; many live in places where few humans venture (like the forest canopy or the yearlong drizzly and frigid paramos); and even if you get a clear shot at them, often you do not know which grasshopper it is: they are notoriously difficult to identify because literature on them is nearly nonexistent, long out of print, hard to get and not in English, causing not only photographers but even entomologists to shun them in field surveys. This photographer is working hard to change that with a series of field guides to neotropical grasshoppers: the first volume of a projected trilogy titled *Grasshoppers of Northwest South America - A Photo Guide*, is already out in both English (<http://goo.gl/tc3Un>) and Spanish versions (<http://goo.gl/UVJ3x>) and a Japanese one is under preparation. The second volume of the series *Grasshoppers of Northwest South America* will be out this year featuring over 80 species of grasshoppers, many of which had never been photographed before. The series totals now over 140 documented species and it is available

in both Spanish and English editions (<http://www.blurb.com/b/323690-8-grasshoppers-of-northwest-south-america-a-photo-gu>).

The neotropics are home to an incredible array of both short-horned (the true grasshoppers) and long horned (katydid) grasshoppers, many of them with incredible shapes and colors. I have even been told and been reproached by people about the colors and shapes of the grasshopper pictures featured in the coming pages being fake ("of course, everybody knows grasshoppers are green", they say, looking me in the eye and waving their fingers), but of course anyone who has roamed the forests and grasslands of the tropics knows that no color is off bounds as far as grasshoppers are concerned. Some of the most colorful ones are even the easiest to see, as they preen fearlessly in plain sight on plant leaves, because their strident coloration signals lizards, frogs and birds, their eternal enemies, that they are far from being a tasty snack, most surely foul-tasting of even poisonous. What follows is a photogallery featuring some of the rarest - or most outrageously colorful - grasshoppers found in my home country, Colombia. Some do not even have a name yet, but I find them all equally beautiful and interesting and I hope you will too!

<http://www.fcgsas.com>



Eumastacidae

This is a new species (name already assigned but yet to be published) from the Yariguíes mountain range in northwest Colombia. Its showy colors are similar of those of the Colombian flag.



Rhammatocerus schistocercoides

Male of the Llanos Locust, which every 15-20 years or so can gather in swarms of millions of individuals devastating any plant in their path and rendering the meat of cows, pigs and any animal which eats it inedible to humans because of its acrid taste.



Aptoceras sp.

Some of the most beautiful species are not so because of colors but because of the way they can blend in with their environment, as this species does in the mossy fallen trunks where it is usually found in the Amazon basin. This one was photographed in Peru.



Acantodis curvidens

Another one of the moss mimicking Katydid, this one is built like a tank in armor plates. When threatened, these katydids do not flee but try instead to scare away the intruder by performing strange dances with their legs and flapping their wings threateningly.



Lactista stramineus

Dry forest grasshoppers such as this one have superb camouflage skills, and only a sudden movement betrays their position, as it happened with this one in the Chicamocha Canyon in eastern Colombia.



New Eumastacidae sp1

Colombia is a speciation hub for Monkey grasshoppers and many species there are yet to be discovered or named, such as this spectacularly colorful species from the highlands of the northwestern province.



Parapiezops homalonotus

Although some Rhytidochrotines are as green or brown as the popular image of the grasshopper, others have the most amazing colors, as this *Parapiezops homalonotus*, from the remote Pacific jungles of the Colombian Baudu mountain range.



Chromacris psittacus pacificus

This species inhabits western Colombia, where it can be found in sometimes very large groups feeding off the poisonous leaves of plants from the tomato family (Solanaceae), from which they pick the toxins announced by their bright and aposematic colors.



Trichopaon sp1

No need to go to an expedition in the jungle to find new, amazing and colorful species. This Rhytidocrotine grasshopper is in all likelihood a new species, found barely half an hour from Medellín, Colombia, in the remnant mountain forests encircling the city.



Lagarolampae

Sometimes lacking wings, the Lagarolampine grasshoppers are related to lubber grasshoppers. They all have small, freckle-like white spots and lines in their metallic-colored bodies, and live in the forests rather than in grassland.



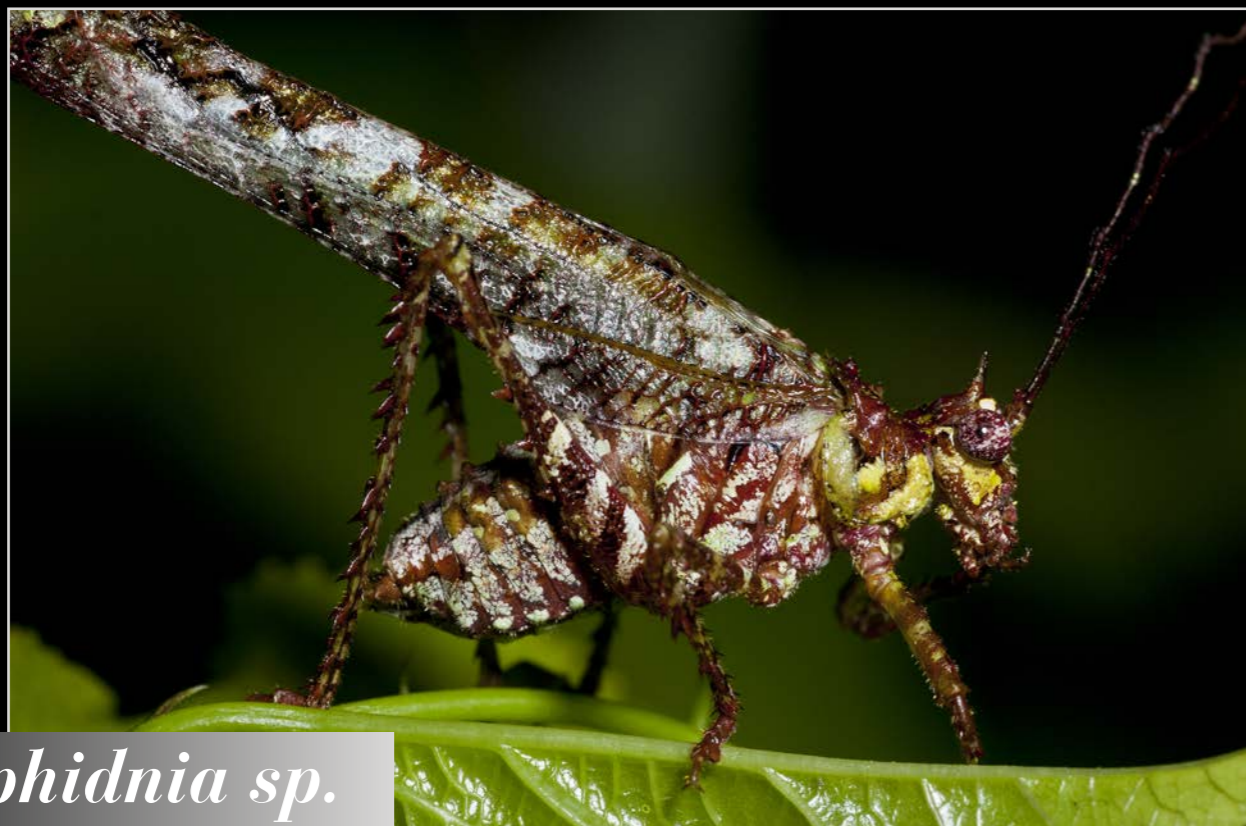
Opaon varicolor

This could well be my all-time favorite species, found in the western montane jungles of Colombia. As its name indicates, there are several different colored morphs (often at the same site!), of which that seen here is the one I find most striking. But there are blue-orange, black-red or red-white-blue versions, among others. As all of their subfamily (*Rhytidochrotinae*) they completely lack wings, and their colors and nonchalant behaviour are probably a sign that they are as poisonous or foul-tasting as their distantly related cousins the monkey hoppers.



Mimetica castanea

To me, the most incredible example of mimetism in grasshoppers or otherwise, is this species, found in the jungles of western Colombia. Its similarity to a dead leaf includes minute venulet patterns in its wings, and even necrotized-looking dark spots!



Paraphidnia sp.

Katydids or long-horned grasshoppers can be masterfully camouflaged, even changing their body shape to fit the most incredible forms: this *Paraphidnia sp.* mimics the lichens and mosses it lives around and feeds on in the jungles of Colombia.



Megacheilacris bullifemur vallensis

A montane species from the Antioquia Department in Colombia. The females of these species do not let males mount them, and the coupling is then an awkward dance in which the male soothes the female with his curvy antennae while mating from the side.



Eumastacidae Caramanta

Monkey grasshoppers are some of the most colorful insects I know, and individuals sporting metallic blue, red and orange at the same time are common. This is a new species, yet to be classified, discovered in 2012 in an Andean valley in Colombia.



Carbonellacris sp.

Carbonellacris is another genus of the Eastern Plains which mimics grasses almost perfectly in color and shape. It is almost impossible to spot one if it does not move.



Championica bicuspidata

Lichen- and moss-mimicking katydids as this spectacular species rely on their incredible camouflage to avoid predation, and only will try to flee if they are touched.



Taeniophora sp.

Grasshoppers of this genus are some of the most colorful in the neotropics. Despite their garish coloration, they are rarely noticed by people because they tend to perch fairly high in plants and they are extremely skittish and agile jumpers.