Eriocera perennis subsp. polillensis subsp. nov.

Female.---Length, about 22 millimeters; wing 16.8.

Differs from typical Eriocera perennis Osten Sacken, as follows:

The first scapal segment of antennae is gray pruinose like the head. Mesonotum shiny black. Legs with the femora dark brown, the tips black. Wings dark brown, the proximal end of cell 1st A pale; cell 2nd A not pale at base. Petiole of cell M_1 longer than the cell. Abdominal crossbands on tergites 2, 3 and 4 only; segment five entirely dark.

¶ The oriental roller is a common bird in nearly all parts of the Philippines. The plumage is largely bluish green, except that the head, ~~and~~ the neck, and and the large wing and tail feathers are blackish brown. There is a large patch of purple on the throat.

¶ The next paper will describe the Philippine kingfishers, hornbills, and bee eaters.

#

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EFFECTS OF EXTRACTS OF ASCARIS VITOLORUM ON EXPERIMENTAL ANIMALS

By Benjamin Schwartz

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Introduction

During the past few months a number of calves (Indian buffalo and native carabao), of the herd of the College of Agriculture, died as a result of heavy infestation with Ascaris vitolorum, a species of rather common occurrence in bovine animals in the Philippine Islands. The

The Philippine, or oriental, roller is noisy, active, and conspicuous. It usually sits motionless on a tree until it sees a flying insect and tumbles clumsily into the air. The flight is ungainly and seems to involve a considerable amount of lost motion. Nevertheless, the roller gathers plenty of insects. Rollers lay four or five glossy white eggs, usually in holes in trees or in banks.

V 4

Post-mortem examination revealed numerous worms, many of which were dead, in the duodenum, a few worms in the stomach, and partially digested worms as well as fragments of worms in different portions of the intestines. Whether the death and resultant desintegration of the worms were responsible for the increase in the severity of the symptoms following ~~following~~ the administration of turpentine could not be determined, because the sick animals were treated before I had an opportunity to keep one or more untreated animals as controls. Since the behavior of the sick calves

The rollers

A Quaitar family of the same order as the frogmouths is represented by one species in the Philippines. In the vicinity of Manila this bird, one of the rollers, is commonly called lorong inic, because of its large red bill. In Australia a similar species is called dollar bird, because of the large pale blue patch that shows on each wing when the bird flies.

abattoirs in Manila, I desire to record the results that have thus far been obtained.

TECNIC

Extracts that were used in the experiments described were prepared from worms that were recovered during post-mortem examination of calves that succumbed to ascariasis. Only living specimens were selected for the purpose of preparing the extracts, and the specimens were thoroughly washed in physiological salt solution repeatedly

The four or five Philippine species belong to ~~the~~ genus Batrachostomus.

back of the head; antennal ledge short, bilobed as seen from above, with a lower projection, the whole structure of a triangular shape when observed from in front; above the clypeus is an acute median carina; antennae longer than the body, slender, the joints beyond the first subequal in width; scape compressed, slightly narrowed basally, seen laterally three times as long as wide, as long as the next three joints united; joint 2 as wide as long, nearly half as long as 3; joints 3 to 12 subequal in length and width; joint 13 longer, almost as long as 2 and 3 united, subacute apically; dorsal cervical plate longer than wide, slightly narrowed anteriorly

The bill is very short and broad and when open displays the large mouth, which is used to catch insects. The feet are small and can be of little use to the bird. The nest is a small pad of soft vegetable fiber and is attached to a horizontal branch of ~~it~~ a tree. It seems inadiquate to hold the one white egg.

There are ~~three~~ genera in this family, and the species are found only in the Oriental and Australian regions. ~~Four or five species occur in the Philippines and~~

25

deep furrows; postscutellum with a low ridge medially, polished; abdomen as in L. defecta; wings hyaline, with a brownish band across the middle of each, and with a pale brown spot behind the band along the costal margin; basal nervure slightly curved distally, as long as the radius, four times as long as the anterior abscissa of the subcosta; nervulus shorter than the subcosta beyond the basal, a trifle shorter than the anterior abscissa; submedian very short, much less than half as long as the subcosta; hyaline plates on femora and tibiae very wide, on the hind legs wider than the joints to which

The frogmouths

The frogmouths are odd night-flying birds, about 20 to 25 centimeters in length, of which very little is known. In general style of coloration the plumage is similar to that of some of the small owls. It is gray, buff, or dusty brown, ~~with~~ with white or creamy fawn spots and bars and vermiculations of blackish brown.

of subcosta longer, about half as long as the subcosta before the latter forks, straight; plates on femora and tibiae narrow, not wider than the joints to which they are attached; metatarsus a little over four times as long as wide, nearly as long as the next three joints united. Coloration as in L. collaris sp. nov.

Habitat.-- Basilan Island, and Surigao, Mindanao, Philippine Islands.

Type.-- Catalogue No. 24323, United States National Museum. Paratype returned to Mr. Baker.

Described from 5 specimens received from C. F. Baker. The type is from Basilan, and one paratype is from Mindanao.

total length, but the body slenderer
and the bill much narrower. The
general color is green, with some
blue on the larger wing and tail feathers.

There is a large patch of red or
red and yellow on the breast and
some of the same on the head.

Colaptes are remarkable for clasping
head downward, suspended by a foot.

longitudinal carinae, and with a high and sharp median ridge below the anterior ocellus, clothed with short silvery hairs; clypeus wider than long, wide anteriorly, the two teeth rounded and far apart; mandibles blackish medially, brown basally, and with rufous teeth; first and second antennal joints yellowish brown; 3 to 9 black; joint 9 one and one-half times as long as wide; joint 10 yellow, longer than 9, slightly narrowed distally mesonotum two-thirds as long as the pronotum, measuring the latter from its anterior border to the apices of the lateral lobes, finely granular, somewhat more coarsely so posteriorly, densely covered with short silvery hairs; postscutellum granular,

Loriculus includes about twenty-five species, of which ten are found only in the Philippines. These small parrots are fond of feeding on tuba and are often abundant where coco-tree flower stalks are being tapped. Colasisi and cosi are common names used for any of the species. They are often kept as cage birds. All of the Philippine species are of about the same ~~size~~ size, ~~slightly smaller than~~ not far from Bolbopsittacus in

swollen postclypeus which is distinctly divided in the midline; postclypeus more than twice as broad as long and showing in front of fontanelle a shallow channel outlined in dark brown; anteclypeus small, white, four times as broad as long; labrum large, swollen, with four apical hairs in two lateral pairs; labrum a little longer than clypeus. Ocelli very near the compound eyes, small, indistinct, hyaline, an elongated oval, long axis nearly parallel to long axis of head. Antennae with 18 (?) to 20 joints, first large cylindrical, heavily chitinized, second shorter, narrow and cylin-

A Bolbopsittacus has only three species, and these are all Philippine— one in Luzon, one in Samar and Leyte, and one in Mindanao. The plumage is green, yellow, and blue.

These birds are short and stout, with short tails and short broad bills. Length, about 15 or 16 centimeters.

with exception of costa and radial sector which are large and a yellowish gray in color and run close together and parallel to one another to near the tip where they become much narrowed, lose their color, the radial sector soon uniting with costa; costa and radial sector joined in distal third of wing by 8 to 9 short, thick, cross veins as in A. inopinatus. Median of anterior wing very variable, united with cubitus through greater or less portion of wing; in many wings separating and uniting once or twice to form enclosed cells (see text fig. 8); in other wings median arises

genus and most of them live in the Philippines. The one in the Mountain Province ~~of Luzon~~, and the one in Tawitawi are distinguished by a ~~spot~~ red crown spot. Paleta and managin are local names for this genus.

Tanygnathus has three or four Philippine species; all of them are much larger than the racket-tailed parrakeets and the tail is wedge-shaped. Length, about 32 ~~m/m~~ to 43 ~~m/m~~ ~~millimeters~~ centimeters. These are the birds commonly called picoy or perico.

Anterior wing scales much larger than posterior pair; both light brown in color with exception of oblique white line and bearing a few scattered spinelike hairs and a line of similar hairs along anterior border.

Large soldier.--Head outstretched, body long and slender, body with head and mandibles as long as adult, head yellow, mandibles reddish black, thorax and abdomen light yellow, hairs scattered on head, numerous on all other parts. Head considerably longer than broad, posterior border straight, corners rounded, broadest near posterior end, converging

All of the true parrots of the Philippines are small enough to be called parrokeets, and most of them is brilliantly colored. They are ~~all~~ classed in four very distinct genera and all are mostly ~~green~~ green ~~and~~ or yellow with ~~little or no~~ less blue ~~and~~ or red in the plumage.

A Prioniturus cannot be mistaken, as its species are the only parrots with so-called racket tails. The central pair of tail feathers extend far beyond the outer feathers and much of the web on each side is missing, leaving the stem, or shaft, with a small tuft of web at the tip. There are several species of this

prominent, edged with red, projecting laterally over bases of antennae, ending at each posterolateral corner of postclypeus in a little rounded chitinous projection, the medial articulation of the mandible; postclypeus short and narrow, more than twice as broad as long; anteclypeus very short and white; labrum short, tongue-shaped, with roundly pointed apex bearing two hairs. Mandibles as in A. flavus but with more gradually incurved tip; antennae of 18 or 20 segments, much like those of adult. Compound eye distinct, hyaline, lying in mid-lateral line of head just behind

The lories and the lorikeets occur in greatest numbers in Australia and in the islands south of the Philippines. One species, (about the size of a colasisi) has been discovered in Mindanao, but not much is known about it. I saw a pet one in Manila that seemed to have a very docile and friendly disposition.

floatlike wing pads united in midline and similar to those described by Snyder for A. simplex were present in the colony.

Distribution and Biological Notes

As pointed out in the discussion under the genus, three collections of Arrhinotermes have been made, all in Rizal within a kilometer or two of the Rizal-Bulacan boundary. The material on which this species is based came from a single colony found in a large hollow guava tree about a kilometer from the boundary. The colony producing the material for this description was

Australia and of Brazil.

Philippine Parrots

One species of cockatoo (about 35 centimeters long) is abundant in nearly every large island of the Philippines. Its plumage is nearly all white; the under tail coverts are vermilion, edged with white; the inner webs of the larger wing and tail feathers are more or less sulphur yellow; the crest is more or less yellow at its base. Catala, abucay, and calangai are some of the names in common use for this bird.

were obtained. These collections were made with Mr. R. C. McGregor on October 4, 1920, and large numbers of winged adults and nearly mature nymphs were found in the nest. Several isolated winged adults have been collected. One (No. 197) was collected by me about the lights of the University Club, San Luis Street, Manila September 27, 1920; another (No. 212) was collected by a friend from the lights in Quiapo, Manila, October 6, 1920; and two others (No. 66 and 245) I found in my house in Ermita, Manila, one on August 28, and one on October 31, 1920.

eggs are smooth and white. The very young birds are naked and helpless.

The parrot family includes about eighty genera and five hundred species. In Australia there are twenty-two genera and sixty-nine species which include some very beautiful birds. The Philippine parrots include only twenty-six species in six genera, none of which is strikingly beautiful or gaudy compared with the wonderfully colored species of

least by Microcerotermes and the ~~xxxx~~ club house partly at least by Coptotermes but possibly also by Arrhinotermes. These termites, being wood-dwellers and apparently building no covered galleries such as those of Microcerotermes or Coptotermes and not dropping faecal pellets as do the Calotermes species, are not easily located; hence the poverty of our collections.

312 25 3

Systematic position.--The few species of this widely separated genus have ~~xxxx~~ not been studied as thoroughly as might be wished. Further study of a wide range of material may show that we have a single

Philippine
1 cockatoos have been seen sleeping
in a large tree. When parrots
are feeding or resting they are silent
and it is difficult or impossible to
see them.

11 Many kinds of parrots nest in
hollow trees or excavate holes in branches,
while others utilize caves or holes in
the ground. Some of the large kinds
lay a few eggs, but the smaller
parrokeets lay ten or a dozen. The

a description of which I have failed to find, it probably differs in its larger size, since Holmgren believes A. wasmanni may represent the soldiers of A. oceanicus; from each of the three closely related species A. japonicus, A. flavus, and A. inopinatus it differs in a number of minor points; from A. flavus, in wing venation, in toothing of mandible of adult, and in relative breadth and length of pronotum; from A. japonicus and A. inopinatus, in greater convergence of anterior end of head of large soldier, etc.

The New Zealand kea is a parrot that has developed a taste which it satisfies by tearing ~~the~~ flesh from the backs of living sheep.

Parrots are swift and direct in flight and when flying are usually noisy and conspicuous. The small Philippine species usually feed singly or in pairs; the larger kinds, ~~and the cockatoos~~ seem to travel in small flocks. Several hundred

lighter in color, head smaller, antennae of 15 or 16 segments, segments longer and slenderer than in A. luzonensis; compound eyes vestigial only, not protruding as in A. luzonensis; pronotum much smaller than in A. luzonensis.

Worker.--Smaller, slenderer, lighter, antennae of 15 segments.

Description

Adult (dealated).--Agrees very closely with A. luzonensis; color above generally darker brown, possibly due to greater age of this specimen which

Characters and habits of parrots

Among the common characters of parrots are the sharply curved culmen, the movable upper mandible, the cere, and the reversed outer toe. Parrots congregate in flocks for feeding and sleeping. Most of them eat fruits, nuts, and seeds, and at times they do considerable damage to corn, bananas, and other crops. Colasisis drink the sap of the coco palm when the flower stalk has been cut.

obconic, usually distinctly larger and more heavily chitinized than second or more distal segments; other segments longer and slenderer than in A. luzonensis; compound eye vestigial, not protruding at all, represented by a vague white area invisible except under microscope; anteclypeus extremely short; narrowest part of gula more posterior than in A. luzonensis; pronotum smaller in proportion than in A. luzonensis.

If your parrot quietly muttering or talking in an undertone to itself do not interrupt or disturb it; it shows it is practising its lesson, and if left alone it will perfect its pronunciation until sure of itself."

Marivelea
CAVITE
MANLA
STA CRUZ
CAVITE
LAGUNA
BATANGAS
Atimonan
Balayan
LUCENA
BATANGAS
Boac
Paluan
CALAPAN
Mindoro
Mangarin
Rombl
Rombion Sub prov.
Culion
CAP
Pana
ANTIQUE
Cuyo
SAN JOSE
ILOILO
PUERTO PRINCESA
PALAWAN
SULU SEA
Cagayan Sulu
ZAMBOANGA DISTRICT
ZAMBOAN
Jolo
Sandakan
14°
13°
12°
11°
10°
9°
8°
7°
6°

A "Never try to teach a bird to talk several different words or sentences at one time; wait until it has thoroughly mastered one thing before teaching another. If the parrot pays no attention or fails to show any signs of learning its piece for several months do not dispair. Sometimes a parrot may be taught for twelve months without its uttering a word, and then it will suddenly blurt out the complete sentence perfectly.

A "After one or two simple things are learned the rest is an easy matter, and the bird will soon learn to repeat long sentences, songs, etc. If you ever notice

"

as in large soldier.

Measurements.

	mm.
Body length	4.30-5.50
Head with mandibles	2.50-2.60
Head without mandibles	1.45-1.50
Head width:	
Maximum	1.32-1.35
Minimum	0.90-0.95
Pronotum width	1.05
Pronotum length	0.50

Worker.--Long, slender, very lightly chitinized; thorax narrow, head light yellow, body transparent white, abdomen colored dirty salmon to brown by

slowly, in clear ringing tones,
using care to always accent
and pronounce the words in
exactly the same way.

the two species makes this position untenable however. A. gracilis differs much more distinctly from A. luzonensis than the latter differs from A. japonicus, A. flavus, or A. inopinatus, with regard to which it is indeed a possibility that we are dealing with a very variable species of wide distribution. The lighter color and lack of chitinization and the very slight development of the compound eyes might be due to a more sheltered life habit; the size difference might be a variation; but the very definite difference in number of antennal segments and their shape and size

have the opportunity to become used to its surroundings. Gradually the bird will associate food and drink with the person that gives them.

A. A. H. Verrill says; "parrots learn to speak more rapidly if taught during the three or four hours after sunrise or before sunset, and the same word or sentence should be repeated over and over

guava stub with living branches, near the Manila North Road, in Rizal Province, about 100 meters from the Rizal-Bulacan boundary monument. This small colony was discovered while searching for Neotermes, one or more species of which are very common in guavas; in fact a number of Neotermes specimens were collected at the same time, probably from tunnels near the surface of the wood. In this connection it is interesting to note that A. luzonensis was found in association with or at least in very close proximity to, Neotermes. The termites were found living in a mass of wood

Training parrots

Teaching parrots and other birds to talk requires time and patience. A child does not learn to speak in a few weeks, and a bird should not be expected to learn more quickly. When a bird has been taken to a new home it should be left undisturbed for two weeks, with no more attention than is needed to give it food and water and to clean its cage. It will then

coarsely punctured.

Wings yellow, shining; pterostigma large, golden yellow like the veins; hair yellow, very fine and short; radial scarcely longer than basal; subcostal near to anterior margin; basal very slanting, originating in the distal end of subcostal, much longer than transversal, this almost vertical; medial ~~back of basal~~ not passing the basal cells. ~~not elongated.~~ Tarsi and distal end of fore tibia rust colored, middle tibia with very small, yellow, scarcely visible spines; ~~segments~~ joints of fore tarsus ~~oblong~~ elongate; claw curved, ~~bidentate~~ furcate, proximal prong

Macaws are ~~very~~ large, long-tailed parrots of South America. The three well-known species are brilliant blue, green, red, and yellow in various bizarre combinations. They are of somewhat uncertain temper, do not usually learn to talk, and are more appropriate as decorations than as pets. A macaw's bill is powerful and dangerous.

~~Parrots seem to enjoy themselves in captivity, and if well cared for they may outlive their owners.~~

of fore tarsus heart-shaped, almost ~~oblique~~; claw straight, comb-shaped, tridentate, its distal prong curved and pointed, the two proximal ones much broader but somewhat shorter than the distal, broadly ~~blunted~~ truncate at end. Abdomen slightly ~~arched~~ convex, smooth, somewhat tapering behind.

Length, 3.8 millimeters.

Mindanao, Butuan; Negros, Cuernos Mountains.

Parepyris acutidens sp. nov.

Male.--Black. Mandible and tegula red-brown; palpi pale, scape and the next following ~~segments loam~~ joints testaceous

The cockatoos are recognized by naturalist as a distinct family of parrots. ~~Most of~~ They are large birds and ~~they~~ are most abundant in Australia and some of the neighboring islands. The sulphur-crested cockatoo is a large white bird that has a ~~large~~ thick curved crest partly yellow in color. The Rose-crested cockatoo has a salmon-pink crest. Cockatoos will learn to talk to some extent, but they seem to be better at tricks. ~~Some of that cockatoos are very beautiful and are called "cockatiels."~~

Diagnosis

Adult.--Head oval; clypeus flat, short, and broad; labrum broad, and convex; fontanelle small, dotlike, rather far back on head. Ocelli small or lacking. Antennae of 15 to 17 segments, segments 2, 3, and 4 very short. Gula as long as broad. Pronotum flat, concave in front and behind. Anterior wing scale much larger than hind one. Wings more or less reticulate and haired. Subcosta of anterior wing not extending beyond the wing scale. Radius running near anterior border with which it is often united. Radius sector simple, parallel to the anterior

great attachment to their mates.

A Lory is a name used for some of the gorgeous parrots of Australia. Their plumage is variegated with red, green, purple, orange, yellow, and other colors, making a display seen in none of the Philippine species. They are valued mainly for their beauty, ~~as they~~ are poor talkers and Some of the small lories are called "lorikeets."

tanelle in front of center of head. Mandibles with a large left and small right basal tooth and beyond that with slight or no toothing. Pronotum flat, concave in front and behind.

Worker.--Head rounded, oval, somewhat larger than the adult. Labrum large and broad. Head sutures not distinct. Fontanelle and palte present. Antennae with 13 to 15 segments.

Subgenus Leucotermes s.s. Holmgren

Adult.--Yellow to brownish-yellow, ~~adults.~~ Wings slightly reticulate, strongly haired.

excellent talkers and whistlers.

Some of the smaller parrots are called parrakeets, which nearly means "little parrots." The grass parrakeet of Australia is one of commonest of there beautiful birds. Its prevailing color is pale yellowish green; the head is yellow, the back is crossed by dark bars, and the throat and the neck are decorated with blue spots. The love birds are small parrots that display

All the species, including those described in this paper, are from the islands southeast of Asia. L. defecta Kieff. occurs both in Borneo and in Singapore if my identification is correct. Its type locality is Palawan Island of the Philippine group.

It seems probable that these wasps are myrmecophilous. They have somewhat the habitus of ants and the wooly appearance of the neck is characteristic of many myrmecophiles.

Key to the species of Loboscelidia Westwood.

Head in front with a hornlike projection -- L. rufescens Westw.

Head in front without such a projection ---------- 1.

A Many kinds of parrots are kept as pets, and they possess a considerable variety of qualifications. The African gray parrot is considered to be one of the best talking birds that reaches the American market, and the many green parrots that live in tropical America and are variously known to dealers as Panamas, Yellow-heads, Cubans, etc., are

tip, tentacle opening from distinct reddish brown tube, antennae of 15 segments, the first very large and strongly swollen at distal end, all segments with a dense covering of short, distally directed, incurved hairs; coxae and femorae swollen, tibiae slightly so, tarsi very slender and highly chitinized.

Worker.---Antennae of 15 segments, first long and curved, not distally swollen; hairs as in soldiers.

Nymph.---Clypeus very greatly swollen, anterolateral corners of frons raised, projecting; antennae of 16 or 17 segments, haired as in soldier.

some kinds thrive in the temperate climates found at high elevation in the Tropics, ~~for example~~, as in the vicinity of Baguio and higher, in the Mountain Province, Luzon.

A Parrots are neither game birds nor song birds, but their flesh is excellent food, and ~~and~~ as pets they are far more attractive than many of the song birds. Parrots seem to enjoy themselves in captivity, and if well cared for they may outlive their owners.

6. Pronotum transverse ---------- 7.

Pronotum a little longer than wide ---- L. inermis Kieff.

7. Face with an inconspicuous median furrow; wings conspicuously covered with brown spots and streaks ---------- L. maculipennis sp. nov.

Face with a sharp median carina; each anterior wing with a yellowish band across its middle ~~o-fuscus~~ ~~n. sp.~~ L. carinata sp. nov.

8. (4) Scutellum longitudinally striate or punctate ------- 9.

Scutellum polished, faintly shagreened or unsculptured---10.

9. Mesonotum shorter than the scutellum, its median lobe shagreened; membrane on hind tibia wider than the tibia itself---------- L. collaris sp. nov.

Mesonotum about as long ~~as long~~ as the scutellum, its median lobe polished -------- L. scutellata sp. nov.

10. Dorsal cervical plate highly arched, not concave ~~n. sp.~~

In Australia there are many species of parrots in higher latitudes, and in Victoria, and Tasmania.

of nine widely separated white thorns, the distal tooth minute, Spines/ hard to see; last segment of abdomen thickly covered with short white hairs on apical half; abdomen mostly black, the last segment yellowish-brown. ♀ Length, 4.5 millimeters.

Habitat.-- Manila, Luzon, Philippine Islands.

Type.-- Catalogue No. 8000, United States National Museum.

Redescribed from the type specimen in the United States National Museum.

Lestodryinus kiefferi sp. nov.

Female.-- Length, 6.5 millimeters. Head a little over

NO 17

Philippine Parrots and Frogmouths

By Richard C. McGregor

Ornithologist, Bureau of Science

1 robin
3 h'd
short yellow

A Parrots and their near relatives, the cockatoos, the macaws, and the lories, are most abundant in the Tropics, but a few species live in the warmer parts of the temperate zones. For example, the 1 Carolina parrakeet was formerly common as far north as Ohio, in the United States; in

and