fulvous, sometimes brown; but its margin is always conspicuously darkened below. The enclosure of the metathorax is strongly granular, contrasting with a comparatively shining area on each side of it. The nervures in the ♀ are distinctly darker than in *salicinella*.

P. S.—June 2nd, 1896. After renewed study, and an examination of the tongue and palpi, I am satisfied that the supposed species of *Andrena* described by me with the marginal cell truncate represents a valid new genus, which I will call *Protandrena*. The species are as follows: *P. asclepiadis*, *P. mexicanorum*, *P. trifoliata*, *P. maurula*, *P. heteromorpha*.

LEPYRUS ALTERNANS AND CAPUCINUS, LIXUS FOSSUS, CREMASTOCHILUS HARRISII AND POLYPLEURUS NITIDUS.

BY JOHN HAMILTON, M. D., ALLEGHENY, PA.

Lepyrus alternans, Casey.—In a former paper (p. 125) the form described under this name was united with *Capucinus*, Schall, owing to an error of observation in regard to the wings. The example then examined was somewhat broken and it is now evident the wings had been removed. A recent dissection of a perfect specimen exhibits a well-developed pair of wings. This form is closely related to *palustris* (perhaps not more than a geographical variety), differing in the form of the thorax, which, instead of being conical, is much wider at middle than at base (subangulate); the rostrum is perhaps stouter and the mesosternum less elevated—both characters somewhat opinionative; there is no femoral tooth in any of the examples seen; the elytral intervals are less regular, either not obviously unequal or the first and third wider, the others narrower and some of them longitudinally sulcate along the middle; the striae are usually finer and closer, and the striae seem to be acutely impressed when the elytra are perfectly denuded. In vestiture ornamentation and other characters the two forms seem identical.

All the examples seen have been from Maine and New Hampshire (Mount Washington and vicinity).

L. capucinus, Schall.—The removal of *alternans* from synonymy with this species necessitates a little change in the former description, where some of the characters peculiar to the latter form were introduced:—

Apterous, black, robust, vestiture nearly uniform. Rostrum stout, longer than the thorax, sulcate on each side of the carina which attains the frontal fovea, rather closely and not coarsely punctured, and with the head thinly clothed with squamoid hairs; scape of antennae short, not attaining the eye; first joint of funicle stout, second thinner and

two-thirds longer, ferruginous to piceous. Thorax transverse, wider than long, sides nearly parallel to apical third, then rapidly rounding to apical constriction; apex one-fourth narrower than base subconvex, surface even, closely covered with granuloid tuberculations, smaller on the disk, larger and rugous on the sides; median carina fine, mostly attaining the base. Elytra oval, striato-punctate, striae when denuded slightly acutely impressed, intervals not obviously unequal, granuloid tubercles fine and sparse; apices conjointly rounded, notch very slight. Anterior femora with the sinuation for the tibiae strongly rectangularly laminate and usually the middle and posterior; mesosternum elevated between the coxæ. The vestiture is very uniform, mostly of white and gray fine hairlike scales tessellated on the elytra, sparser below; the median spot on the elytra usually seen in the other species is absent, but there is a white one on each apical protuberance; the femora are not annulated and the abdominal spots are wanting. The American examples seen are from Michigan; the European, from Hungary.

L. gemellus, Kirby.—This elegant species was taken by Mr. F. C. Bowditch, in the Rocky Mountains near Eagle Pass, at an elevation of 13,000 feet or over, examples of which, through his courtesy, I have been enabled to see. From these the recorded distribution is Vancouver Island; Alaska (the Peninsula of Kenai and the adjoining Continent, also the Yukon); the Hudson Bay region to Lat. 65°. In the former notice, p. 126, the word "scalerous" should read scabrous.

Lepyryus palustris.—Examples from Indiana in the cabinet of F. H. Snow, Chancellor of the University of Kansas, are absolutely identical with the cylindrical, long-beaked European form usually sent to America.

Ixus fossus, Lec., 1876, Proc. Am. Phil. Soc., XV., 417; *luculentus*, Casey, Ann. N. Y. Acad. Sci., VI., 209.

Fossus was described from a unique taken at Enterprise, Florida; *luculentus* from examples taken at Lake Worth, Florida, about 250 miles southward. Except in size, the individuals of this species are little variable, but enough so to make two or three species of by any one inclined in that direction. Mr. Casey's types seemingly differ from Dr. Leconte's in three or four points which more ample material shows to possess only individual value. The material in my collection, ♂ and ♀, is from near Jacksonville and from Lake Worth, the latter due to the munificence of Mrs. Slosson, who recently sent me nine examples. The ♂ examples from Jacksonville agree with Dr. Leconte's description of the thorax and basal fovea, the ♀ with his description of the supposed ♀ which is the ♀ of Mr. Casey's *luculentus*. In the males of the examples from Lake Worth the thorax and basal foveæ are diverse, some as in *fossus*, some as in *luculentus*, and others intermediate. The characters drawn from the beak are likewise mutually intermixed.

The following description drawn from 10 male examples illustrates

the principal characters of the species, with the most noteworthy differences observed among individuals :—

Beak about as long as the thorax, sometimes longer, mostly shorter ; a broad transverse impression between the eyes more or less evident ; a round frontal fovea, a smaller elongate one between the insertion of the antennæ sometimes obsolescent ; in some examples a trace of a carina between the foveæ, but usually not ; punctuation fine and sparse to coarser and denser, clothed with minute whitish scales to tip ; antennæ inserted about one-third from apex, slender, light to dark ferruginous ; club mostly darker ; thorax about as long as wide, sometimes longer, sometimes shorter, conical ; process of base prolonged more or less acutely between the elytra in place of the scutellum, which is not visible ; fossa deep, sometimes limited at basal third, sometimes the impression extends to middle and sometimes narrowly to apical margin, densely rugoso-punctulate ; some fine punctures, mostly on the sides ; elytra not or but little wider than the thorax, with irregular series of moderately coarse punctures, of which the inner three are usually well defined ; tips separately acutely rounded and conjointly emarginate ; uniformly mottled with condensed spots of short white scaly pubescence, as is likewise the thorax and under side, the latter also ornamented with numerous denuded black dots ; femora annulate with white.

Length, .30-.40 inch. Habitat.—Common from Jacksonville, Fla., southward.

The denuded elytral area mentioned by Mr. Casey is entirely due to abrasion, as is also that of the disk of the thorax, neither being present in recent specimens. The surface in some of the examples is covered with a yellow pollenoid powder such as is seen in *concauus*. The female seemingly differs from the male only in the more cylindrical, slightly longer, less pubescent, and more finely punctulate beak, with the antennæ inserted near the middle, and the usually longer thoracic impression.

Cremastochilus Harrisii, Kirby.—This species was taken, by myself, with ants (species not observed) in Western Pennsylvania [CAN. ENT., XX., 160]; also in Florida, with a large ant inhabiting under a board [Ib., XXVI., 255], which Prof. Schmitt names *Camponotus floridanus*. In March, 1895, I took an example with the same species of ant at Lake Worth, under circumstances somewhat different from the ordinary. A small pine had been broken off by a wind-storm about six feet from the ground, the broken end resting on the stump ; under the loosening bark of the tree a colony of ants had formed a nest, and in it was this *Cremastochilus* ; the ants were in great consternation at the exposure of their habitation, and while anxious and in much hurry to remove their pupæ to places of safety, they appeared to be equally solicitous about the *Cremastochilus*, several of them laying hold of it and dragging it with them. At first it simulated death, but after having been dragged awhile it got up and walked off quite lively under their guidance.

Polypleurus nitidus, Lec.—This fine beetle, rather rare in collections, is abundant along Lake Worth, Florida, in pine hummocks where there are stumps. The larva when full-grown is about an inch and one-half in

length, cylindrical but a little flattened, about one-eighth of an inch in diameter; the body is hard, solid, and not easily crushed; the mandibles large, sharp, and powerful enough to draw blood; the colour is pale yellow with the head piceous. It is very active. The beetle breeds in pine stumps which have been cut two or three years and have dried out; the larvæ devour the solid wood always in a vertical direction, two or three dozen of them being frequently found in a stump six or eight inches in diameter, the inside of which is mostly reduced to powder by the time they are ready to pupate. I took the beetle from February to May, and it may possibly disclose at all times during the year.

This species is probably not confined to pine, as I took it frequently quite remote from any pine, under boards, bark, etc., and I strongly suspect that it breeds in roots, etc., after the manner of some of the Elaterid larvæ called "wireworms."

TWO NEW HESPERIDS.

BY HENRY SKINNER, PROF. ENT., ACAD. NAT. SCI., PHILADELPHIA.

Pamphila Howardi, n. sp.

Male.—Expands 1.50 inches. *Upper side*: Superiors tawny with a fuscous border a little more than one-eighth inch in width; there are from one to four small subapical tawny spots in the fuscous border; at end of cell a dark spot which may or may not be connected with the stigma; stigma rather more than an eighth inch in length, very narrow and unbroken, and extending to inner margin. Inferiors have the same fuscous border and tawny central area. *Under side*: Superiors with tawny central area and border same as upper side; there is a large triangular spot extending into the wing from the base. The tawny colour above this spot is of a darker hue than that below and outside of it. Inferiors very light brown, generally with four or five very faint tawny spots in the central area.

The females are larger, without the stigma and have the under side of inferiors immaculate. Described from eight specimens in my own collection and four in that of the U. S. National Museum, through the courtesy of Prof. L. O. Howard. They are all from Florida; two being from Georgiana, on the Indian River; exact locality of others unknown. This species has usually been confounded with *viator*, but is really nothing like it. The species belongs to the *arpa*, *palatka*, *Aaroni*, *viator* group. It