Some Bostrichidae, Languriidae and Ciidae (Col.) from the Philippine and Bismarck Islands collected by the Noona Dan Expedition.

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The following is the result of an examination of the material of the coleopterous families Bostrichidae, Languriidae and Ciidae collected during the Danish "Noona Dan" Expedition in 1961—62 to various localities in the southern Philippines and to several islands in the Bismarck Archipelago (see Petersen 1966, Ent. Meddr., 34:283—304). The material is now deposited in the Zoological Museum, Copenhagen, Denmark, apart from a few specimens in my collection.

The material of Bostrichidae (33 specimens) is rather unimportant. It contains eight species, all well-known and often very widely distributed.

The 17 examples of Languriid beetles, all from the Philippines, were separated into five species by the present study. Two species and one subspecies (all from Palawan) are considered to be new to science, and described accordingly; the remaining two species are rather well-known.

The very small collection of Ciidae (only 7 specimens) is of particular value. It consists of no less than five species, all considered new to science and described below; two from Palawan and one from Mindanao in the Philippines, and one species from each of the islands Dyaul and Mussau in the Bismarck Islands.

Family BOSTRICHIDAE.

Subfamily DINODERINAE.

Dinoderus bifoveolatus (Wollaston).

Detailed references: vide Chûjô, 1964, Nature and Life in Southeast Asia 3: 203—204.

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 2 ex., 14 Aug. and 15 Sept. 1961.

World wide, especially abundant in tropical and subtropical districts,

Dinoderus minutus (Fabricius).

Apate minuta Fabricius, 1775, Syst. Ent.: 54, (Nova Zelandia).

Bismarck Islands: NEW IRELAND: Lemkamin, 900 m, 4 ex., 9—20 April 1962.

Cosmopolitan throughout tropical and subtropical regions, and has been carried by commerce to all parts of the temperate zones.

Subfamily BOSTRICHINAE.

Heterobostrychus aequalis (Waterhouse).

Bostrichus aequalis Waterhouse, 1884, Proc. Zool. Soc. Lond.: 215—216, Pl. xvi, Fig 3, Q (Timor).

Philippines. — BALABAC: Dalawan Bay, 1 ex., 7 Oct. 1961.

Malagasy subregion, Oriental region, Austro-Malayan and Polynesian subregions.

Heterobostrychus hamatipennis (Lesne).

Bostrychus hamatipennis Lesne, 1895, Ann. Soc. Ent. France, 64:173, (Indo-Chine, Chine, Hindostan, Palawan et Madagascar).

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 1 ex., 21 Aug. 1961.

Malagasy subregion, Oriental region, Japan (except the northern part of Honshu and Hokkaido) and Bonin Islands.

Sinoxylon anale Lesne.

Detailed references: vide Chûjô, 1964, Nature and Life in Southeast Asia 3:204—206.

Philippines. — TAWI TAWI: Tarawakan, 1 ex., 28 Oct. 1961; Lapid Lapid, 1 ex., 21 Nov. 1961.

Malagasy subregion, Oriental and Australian regions, and carried in commerce to various parts of the world.

Xylodectes ornatus (Lesne).

Xylopertha ornata Lesne, 1897, Ann. Soc. Ent. Belg., 41:19, (Bombay).

Philippines. — BALABAC: Dalawan Bay, 1 ex., 9 Oct. 1961.

Known from India, Indo-China, Sumatra, Borneo, Philippines and Formosa.

Xylothrips flavipes (Illiger).

Detailed references: vide Chûjô, 1964, Nature and Life in Southeast Asia, 3:211—213.

Philippines. — PALAWAN: Brooke's Point, Uring Uring, 2 ex., 14 and 23 Aug. 1961; Mantalingajan, Pinigisan, 600 m, 2 ex., 3 and 23 Sept. 1961. — BALABAC: Dalawan Bay, 1 ex., 12 Oct. 1961. — TAWI TAWI: Tarawakan, 3 ex., 24—25 Oct. and 6 Nov. 1961; Lapid Lapid, 1 ex., 21 Nov. 1961. — MINDANAO: Curuan district, Sapamoro, 4 ex., 17, 19 and 20 Dec. 1961.

Malagasy subregion, Oriental and Australian regions.

Xylothrips religiosus (Boisduval).

Apate religiosa Boisduval, 1835, Voyage de l'Astrolabe, (2): 460—461, (Doreï, Afrique, Maurice, Bourbon et Indes orientales) (pars).

Bismarck Islands: — NEW BRITAIN: Cape Hoskins, Valoka, 1 ex., 8 July 1962. — DYAUL: Sumuna, 4 ex., 1, 6 and 7 March 1962. — LAVONGAI: Banatam, 2 ex., 18 and 23 March 1962. — MANUS: Lorengau, 1 ex., 19 June 1962.

Solomon Islands. — GUADALCANAL: Honiara, 1 ex., 27 July — 4 Aug. 1962.

Widely distributed throughout the tropical districts of the Pacific Ocean.

Family LANGURIIDAE.

Subfamily LANGURIINAE.

Anadastus filiformis (Fabricius).

Trogosita filiformis Fabricius, 1801, Syst. Eleuth., 1: 152—153, (Sumatra).

Philippines. — PALAWAN: Mantalingajan, Pinigisan, 600 m, 6 ex., 1 Sept. 1961. — TAWI TAWI: Tarawakan, 3 ex., 20 and 25 Oct., 13 Nov. 1961.

Widely distributed: Sumatra, Java, Borneo, Philippines, Formosa, Loochoos, Japan, S. China, Viet-Nam, Cambodia, Thailand, Burma, India.

Anadastus melanosternus (Harold).

Languria melanosterna Harold, 1879, Mitth. Münch. Ent. Ver., 3: 53 (key) and 82—83, (Luzon).

Philippines. — TAWI TAWI: Tarawakan, 1 ex., 25 Oct. 1961; Lapid Lapid, 2 ex., 21 Nov. 1961. — MINDANAO: Curuan district, Sapamoro, 1 ex. 16 Dec. 1961.

Known from Philippines, Formosa, Loochoos, S. China, Singapore, Viet-Nam, Thailand, Burma, India, Ceylon.

Anadastus minor sp. nov.

Length: 4.0 mm. Body very slender, subcylindrical with the dorsum more flattish than the underside, glabrous on the dorsum and very finely but not closely pubescent on the underside. General colour red-brown, with the middle of vertex and pronotum somewhat infuscated, the antennae piceous, the elytra metallic dark blue, the metathorax piceous at each side of the middle, and the legs pitchy red with femora (basal part excepted) distinctly infuscated.

Head strongly convex, rather strongly and closely punctured. Antennae: 3rd segment distinctly longer than the 4th, 4th—6th nearly equal to one another, 7th distinctly dilated but longer than broad and much narrower than the 8th, 8th-10th strongly transverse, 11th subquadrate-rotundate. Pronotum much longer than broad, somewhat narrower at the base than at the apex, gently rounded at each side with a gentle constriction near the base, widest a little beyond the middle, rounded at the front corners, sharply angulated at the basal corners; dorsum distinctly convex, punctured as the head, strongly depressed along the basal border (the depression stronger between the lateral fossettes and very coarsely punctured), lateral fossettes triangular with a short but distinct and deep sulcus at the tip of each fossette (these sulci divergent to each other). Scutellum cordate, impunctate and smooth on the surface. Elytra parallel-sided, but the apical part narrowed as usual, subtruncated at the apical border; dorsum with seven files of distinct punctures on each elytron, with the interstices flattish and impunctate; humeri lightly raised, free of punctures. Metacoxal lines well-developed, parallel to each other, extending a little posterior of the middle of the sternite concerned.

Holotype, Philippines, PALAWAN: Mantalingajan, Pinigi-

san, $600~\mathrm{m},~6~\mathrm{Sept}.~1961,$ (Noona Dan Exped.); in the Zoological Museum, Copenhagen.

This new species is somewhat allied to *A. oberthuri* Villiers, 1945, from Sumbawa and Lombok, but *A. minor* sp. nov. is separated from it by the following characters: Antennal club broader and consisting of five segments, vertex and pronotum infuscated at the middle, antennal club and abdomen not black, etc. *A. minusculus* Villiers, 1945, from Gilolo is also somewhat resembling the present new species, especially in the point that the antennal club consists of five segments, but in *A. minusculus* the 6th antennal segment is dilated terminally (cylindrical in the present species), the pronotum is not distinctly longer than broad and the metacoxal lines are nearly reaching the posterior border of the sternite concerned.

Anadastus nitidus palawanus subsp. nov.

This new subspecies is distinguished from the nominate form — A. nitidus nitidus Fowler, 1908, from Borneo — by the following points: Head and prothorax red, antennae with the seven basal segments reddish but gradually infuscated terminally and the club black, elytra metallic deep greenish blue, scutellum black with a dark red spot in the centre, mesothorax rather dark red, metathorax blackish with a slight metallic greenish blue shimmer, abdomen dark red or pitchy red with the sides more infuscated than the middle, legs rather deep or dark red with tibiae and femora (more or less except the basal parts generally pitchy black but in places also more blackish). Head and pronotum finely but not very closely punctured, antennae with the 3rd segment a little longer than the 4th but not 1.5 times as long as the latter, and the 7th segment (which is the 1st segment of the club) not transverse (at apex about as wide as long), each interstice of the files of distinct punctures on the elytra with a rather regular file of extremely fine punctures which are visible under a high power lens. Length: 6.0 mm.

Holotype, Philippines, PALAWAN: Brooke's Point, Uring Uring, 18 Aug. 1961 (Noona Dan Exped.); in the Zoological Museum, Copenhagen. A second specimen from the same locality, but 22 Aug., most certainly belongs to this species, however, it is not designated as paratype because it is without head and prothorax.

Doubledaya purpurea sp. nov.

Length: 7.5 mm. Body very narrowly elongate, rather markedly narrowed from the humeral area to the apex of elytra, glabrous on the dorsum (apart from some pubescence along the apical and laterio-apical borders of elytra), very finely and very sparsely pubescent on the underside, with the last visible abdominal sternite, especially posterior half, closely pubescent. Dorsum metallic purple with a strong lustre (elytra more lightly purplish than the head and pronotum); mouth-parts rather closely pubescent, red-brown, with the apices of mandibles black; apical area of clypeus rather dark red-brown; antennae with the six basal segments red-brown, but the five terminal segments black: underside of the head and the four basal sternites of the abdomen deep red-brown, underside of the prothorax metallic purple with the median part reddish purple, meso- and metathorax purplish black, last abdominal sternite black with the base dark red-brown; legs with the coxae, trochanters, bases of femora, bases of tibiae and claws red-brown, but most parts of femora and tibiae are black with a slight metallic purple sheen.

Head rather sparsely punctured, these punctures finer and sparser on the posterior area; clypeus trapezoidal, sparsely pubescent-punctate with the anterior area impunctate and glabrous. Antennae with the 3rd—6th segments slender and the rough order of their lengths is as follows: 3>5>4>6, but the difference between the 3rd and 6th is not large; the five terminal segments form a rather loosely articulated club of which the 1st segment is much narrower than the others and somewhat longer than wide, the 2nd club segment about as long as broad, the 3rd and 4th strongly transverse, and the 5th transverse oval. Pronotum somewhat longer than broad, with the front corners rounded, the lateral borders distinctly marginated and gently rounded at the anterior half but slightly constricted at the posterior half, the basal corners acuminated, the basal border strongly marginated, subarcuated at the median part and lightly emarginated between the middle and side; dorsum strongly convex, but distinctly depressed closely along the basal border, finely but not closely and rather evenly punctured on the whole surface, transversely grooved closely along the median part of basal border and with coarser punctures in this groove. Scutellum nearly cordiform, flat and almost impunctate on the surface. Elytra moderately convex, with

seven files of strong punctures on the disc of each elytron and each interstice provided with a rather regular file of finer punctures; apical border of each elytron obliquely truncated, with the laterio-apical corners sharply denticulated and more produced posteriorly than the sutural corner. Prosternal process rather narrow, parallel-sided, with the posterior end rounded. First abdominal sternite without metacoxal lines. Legs slender.

Holotype, ♂ Philippines, PALAWAN: Mantalingajan, Tagembung, 1150 m, 19. Sept. 1961, (Noona Dan Exped.); in the Zoological Museum, Copenhagen.

This new species is easily separated from the known species of the present genus by its unique coloration of the body, peculiar shape of the antennal club, basal fossettes on pronotum lacking etc.

Family CHDAE.

Subfamily CIINAE.

Cis (Cis) bismarckensis sp. nov.

Body cylindrical, narrowed in front, rather closely clothed with pale yellowish setigerous pubescence on the dorsum and alsorather closely clothed with grey-white hairs on the underside. General colour deep red-brown, somewhat lustrous, with the antennae, palpi and legs light yellow-brown.

Head invisible from above, coarsely punctured with the interspaces roughly structured; front border of frons strongly trisinuate, with a transverse row of four foveae at the base of these three lobes; labrum small, quadrate, with the front corners and front border commonly gently rounded. Last segment of maxillary palpus elongate triangular, rather flattish. Antennae 10-segmented; 1st segment oblong, 2nd truncate conical and much shorter than the 1st, 3rd slender and cylindrical, 4th obtrapezoidal and much shorter than the 3rd, 5th—7th very short and transverse, 8th—10th strongly dilated and forming a loosely articulated club.

Pronotum subquadrate, narrowed in front, commonly rounded at the front corners and front border, narrowly but distinctly marginate all the way round the border, fore angles each very much larger and basal angles only a little larger than 90°, basal border straight; dorsum distinctly convex, microscopically finely shagreened throughout, rather finely and rather closely punc-

tured. Scutellum minute, transverse. Elytra somewhat more than one and a half times as long as the length of pronotum, strongly transversely convex on the dorsum, with the posterior area vertically curved downwardly, very strongly and closely punctured and the punctures are arranged in regular files on the median disc.

Legs: all tibiae very strongly expanded terminally like an elongate triangular lobe and distinctly denticulate at its outer anterior border, pro- and mesotibia nearly equal in size, metatibia not so much expanded as the two anterior tibiae.

Length: 1.25 mm.

Holotype and one paratype, Bismarck Islands, DYAUL: Sumuna, 11 March 1962, from soil litter with rotting plant parts on the ground in original rain forest, (Noona Dan Exped.); in the Zoological Museum, Copenhagen, and my own collection (paratype).

The present new species is easily distinguished from the known species by its very small size and some very characteristic features, especially of the head.

Cis (Cis) palawanus sp. nov.

Body elongate, cylindrical, narrowed in front and also behind as usual, closely clothed with very fine and pale yellowish pube-scence (the pubescence of the elytra much denser but shorter than that of the underside, with the exception of the marginal pubescence of elytra which is robust and long like setae); head and pronotum almost glabrous, with the exception of mouth-parts and antennae which are finely pubescent, and the lateral borders of pronotum are clothed with seta-like pubescence. General colour light yellow-brown, elytra more pale yellowish, head and legs a little more reddish, and the borders of almost all sclerites deeper or darker coloured than other parts.

Head invisible from above, hidden under the anterior part of pronotum, finely and closely granulate-punctulate; from with the posterior part gently convex in the same way as the vertex, but the anterior part strongly and broadly depressed (this depression deepened medially; the anterior border of the depressed part assuming a quadrangulate ridge, but the tip of each angle not sharply angulated); labrum a little broader than long, strongly rounded at the front corners, gently arched forwardly at the front border, clothed with some long pubescence on the surface. Antennae 10-segmented; 2nd segment much thicker but distinctly

shorter than the 3rd, 4th nearly equal in thickness to the 3rd and nearly equal in length to the 2nd, 5th—7th strongly abbreviated, 8th—10th strongly dilated and forming a loosely articulated club.

Pronotum 1.5 times as long as broad, posterior three-fifths parallel-sided, anterior two-fifths narrowed anteriorly and gently rounded at the base; front border strongly produced anteriorly, with the median part ridged forwardly, notched in the middle and angulated at each side of this notched part (the anterior border thus bisinuate as a whole); front corners distinctly angulated, produced forwardly; lateral borders narrowly marginated, gently sinuate in the lateral aspect; basal corners rounded, larger than 90°; basal border nearly straight, narrowly marginated; dorsum strongly transversely convex, with the medio-anterior area depressed (the median part of this area especially markedly impressed), very closely punctate on the whole surface. Scutellum about 3 times as broad as long, acuminated at the medio-posterior end, closely pubescent-punctate on the surface. Elytra a little more than 1.5 times as long as pronotum, strongly transversely convex and closely pubescent-punctate on the dorsum. Prosternum with the intercoxal part forming a keel-like elevation.

Femora rectangularly dilated, somewhat thickened, deeply grooved at the underside for the reception of the corresponding tibia when in repose. Tibiae comparatively robust, each thickened terminally, but neither strongly expanded nor spined at the apex, sharply ridged at the dorsal border.

Length: 3.0 mm.

Holotype, Philippines, PALAWAN: Brooke's Point, Uring Uring, 20 Aug. 1961. (Noona Dan Exped.); in the Zoological Museum, Copenhagen.

This new species is somewhat allied to Cis (Cis) polysticti Chûjô, 1939, from Formosa, but it is very easily distinguished from this species by the following points: Body light yellowbrown, with the elytra more pale yellowish, from quadrangulate at the front border, pronotum strongly biangulate at the median part of front border, etc.

Subfamily ENNEARTHRONINAE.

Ennearthron (Ennearthron) mussauense sp. nov.

Body subcylindrical, somewhat narrowed in front and also behind, closely pubescent on the whole surface. General colour of the

dorsum dark brown, somewhat lustrous, with the apices of mandibles piceous and the labrum and antennae (except the three terminal segments) yellowish; underside and legs red-brown.

Head gently convex, finely and rather closely pubescent-punctate, transversely depressed at the anterior area of frons, strongly ridged and produced like a visor at each side of the middle of anterior border of frons; labrum subquadrate, only a little broader than long, strongly rounded at each front corner, gently rounded and finely pubescent at the front border, surface very lightly convex. Antennae 9-segmented; 3rd—6th segments slender, 3rd about as long as but much thinner than the 2nd and about as long as the 4th and 5th together, 5th shorter than the 4th but longer than the 6th, 7th—9th very strongly dilated and forming a loosely articulated club. Pronotum subquadrate, distinctly broader than long; front border gently arched forwardly, immarginated; front angles near 90° respectively, but the basal angles each larger than 90°; lateral and basal borders narrowly but distinctly marginated and each gently convex; dorsum convex from side to side, strongly and closely pubescent-punctate. Scutellum small, trigonate, with a few pubescent-punctures on the surface. Elytra convex on the dorsum, strongly, closely and not striately pubescentpunctate. Underside finely but not very closely pubescent-punctate (the pubescence very much thinner than that on the dorsum); 1st visible sternite of abdomen with a distinct ciliate-pore in the centre. Legs moderate in size, with the femora somewhat dilated and the tibiae slender at the base but somewhat thickened terminally.

Holotype, Bismarck Islands, MUSSAU: Talumalaus, 26 Jan. 1962, (Noona Dan Exped.); in the Zoological Museum, Copenhagen.

The present new species is somewhat related to *Ennearthron nigricans* Fauvel, 1894, from New Caledonia, but may very easily be distinguished from it by the coloration of body, the colour and thickness of the pubescence on the dorsum of body, and the shape of the anterior borders of frons and pronotum are different.

Subfamily OCTOTEMNINAE.

Octotemnus mindanaonus sp. nov.

Body cylindrical, narrowed in front and also behind, glabrous on the dorsum, but extremely finely pubescent on the underside. General colour dark red-brown, lustrous, with the apical parts of mandibles black, the five basal segments of antennae pale yellowish but the three terminal segments blackish, the pronotum (except the anterior part) and the elytra (except the basal part) shining black.

Head: post-ocular area convex, impunctate; inter-ocular area flattish, oblique (forming another level against the post-ocular area), impunctate, strongly ridged, produced and reflexed at each side of the central area of anterior part: labrum small, quadrate. Eyes small, rather coarsely facetted. Antennae 8-segmented; 3rd segment very slender and about as long as but much thinner than the 2nd, 4th and 5th strongly abbreviated and about equal to each other, 6th—8th strongly dilated and forming a loosely articulated club. Pronotum subquadrate, somewhat broader than long, parallel-sided (but somewhat narrowed in front and also behind), strongly arched forwardly and immarginated at the front border, narrowly but distinctly marginated at the lateral and basal borders; front corners somewhat angulated and prominent; basal corners strongly rounded; dorsum very strongly convex from side to side, rather coarsely and evenly punctured. Scutellum small, trigonate, flat and impunctate on the surface. Elytra strongly convex from side to side, rather strongly, closely and evenly (not striately) punctured. Legs comparatively short, with the femora robust and each one of them longer than the corresponding tibia.

Length: 1.5 mm.

Holotype, Philippines, MINDANAO: Curuan district, Sapamoro, 20 Dec. 1961, (Noona Dan Exped.); in the Zoological Museum, Copenhagen.

This new species is distinguished from *Octotemnus laminifrons* Motschulsky, 1860, from Japan and Formosa, by the following characters: Body smaller, front border of inter-ocular area more strongly projected forwardly at each side of the middle, 1st visible sternite of abdomen without a central tubercle, etc.

Octotemnus palawanus sp. nov.

Body cylindrical, somewhat narrowed in front and also behind, glabrous on the dorsum with the exception of the posterior part of elytra which is finely but not closely clothed with setigerous pubescence, very finely but sparsely pubescent on the underside.

Dorsum black, lustrous; anterior part of head together with the mouth-parts and antennae yellow-brown, but the apices of mandibles infuscated; underside together with the elytral epipleura rather dark yellow-brown, with the thorax, especially the metathorax, more or less infuscated; legs yellow-brown.

Head convex, impunctate, with the clypeus depressed and flattish, and the front-clypeal area ridged at each side. Eyes small, coarsely facetted. Antennae 8-segmented; 3rd segment about as long as but very much thinner than the 2nd, 4th-5th much abbreviated, together nearly as long as the 3rd, 6th—8th strongly dilated and forming a loosely articulated club. Pronotum about as long as broad, strongly narrowed anteriorly in dorsal aspect, very strongly convex from side to side (the anterior half invisible from above); front border very strongly arched forwardly; four corners very strongly obtuse; lateral and basal borders narrowly but distinctly marginated; dorsum finely and very sparsely and unevenly punctured. Scutellum trigonate, impunctate on the surface. Elytra cylindrical in dorsal aspect, narrowed behind, rather closely and coarsely punctured. Legs: femora dorso-ventrally dilated (compressed anterio-posteriorly); tibiae strongly dorsoventrally dilated at the apical part and finely but distinctly denticulated on the dorsal ridge of the dilated part.

Length: 1.00—1.25 mm.

Holotype, Philippines, PALAWAN: Mantalingajan, Pinigisan, 600 m, 2 Sept. 1961; paratype, same locality but 24 Sept., (Noona Dan Exped.); in the Zoological Museum, Copenhagen. and in my collection (paratype).

This new species is clearly distinguished from the known species of the present genus by the following characters: Body very small and narrow, strongly narrowed anteriorly at the anterior part, clothed with robust setigerous pubescence on the elytra (except on the basal part), unique denticulation of the dorsal ridges of tibiae, etc.

Summary.

The material of the expedition contained 18 species. Seven species and one subspecies are new to science and described, viz. two species and one subspecies in the Languriidae (Anadastus, Doubledaya) and five species in the Ciidae (Cis, Ennearthron, Octotemnus).