Onderorde TUBULIFERA

Phlaeothripidae
Megathripinae
Cryptothripini
Gastrothripina

Nesothrips dentipes O. M. Reuter, 25 . V, 1 ♀.

Megathripini
Megathripina

Megalothrips bonannii Uzel, 8 . VI, 1 ♀.

Phlaeothripinae
Haplothripini

Haplothrips aculeatus F., 12 . V, 4 ♀ en 1 ♂; 18 . V, 4 ♀ en 1 ♂; 25 . V, 8 ♀ en 2 ♂; 8 . VI, 4 ♀ en 2 ♂.

Haplothrips distinguendus Uzel, 8 . VI, 1 ♀.

Haplothrips-species, 22 . VI, 1 ♀. Ook Dr. H. Priesner kon deze soort niet op naam brengen.

Xylaplothrips fuliginosus Schille, 12 . V, 2 ♀; 25 . V, 3 ♀.

Phlaeothripini
Phlaeothripina

Acanthothrips nodicornis Reuter, 8 . VI, 1 ♀.

* *Phlaeothrips annulipes* Reuter, 25 . V, 1 ♀.

Hoplothripini
Hoplothripina

Hoplothrips fungi Zett., 29 . VIII, 1 ♀ achter de schors van een *Betula*-species.

LITERATUUR.

Franssen, C. J. H. & Mantel, W. P. De Thysanopteren-fauna van de Bennekomse Meent. *Entomologische Berichten, deel 21 (1961): 141—144.*

DESCRIPTIONS OF NEW AND REDESCRIPTIONS OF ILL KNOWN ORTHOPTERA PART I.

by
C. WILLEMSE

In the course of years, much material has accumulated, which remained undetermined, by lack of time and other reasons. At my age time has come to clear away this material and to describe it, giving it his proper place in the systematics of the group Orthoptera. The material piled up belongs to different Musea and partly to my own collection.

I wish to draw your attention to the opinion of Mr. G. M. Henry as to the necessity of good illustrations, for without these it is for future workers, who have no access to types or well determined collections, a severe handicap or even an impossibility to recognize a specimen at hand.

The same may be said of keys, that are not only intended for the composer himself, but also for future workers. A good key will stand for years and years and enable one to incorporate new species, without losing its essential character.

We are happy to see that in the last years, authors are more and more convinced that this is the good way for serious work.

Superfamily: ACRIDOIDEA
Family: Catantopidae
Subfamily: *Cantantopinae*

ALTHAEMENES TABANGA nov. spec.

Male: General coloration black and yellow, all tubercels black. Antennae black, basal joint black, at the base not inserted on a black quadrangular spot, but on a yellow underground; insertion of the third joint yellowish, the extreme tip of apical joint somewhat lighter coloured. Head yellow, frons with a few black points or spots, frontal ridge for the greatest part black, clypeal margin black, lateral keels with some black tubercels; clypeus black with two yellowish spots a little below the clypeal margin; labrum black with a dirty yellow spot; mandibles black, yellow at the base; palpi brown to blackish brown; cheek yellow with two black tubercels; eyes reddish brown, vertex yellow with four small black tubercels between the eyes, above the antennal insertion also with some small black tubercels linearly arranged; behind the eyes with a narrow black postocular band reaching the anterior margin of pronotum and an incomplete blackish strike a little above this band, also reaching the anterior margin of pronotum. Pronotum yellow in the pro- and mesozona with black tubercels; along the anterior

[1]) Ceylon Journ. of Science sect. B. vol. XVII, 1933, p. 155.

Fig. 1. *Althaemenes tabanga* n.sp.

Fig. 5. *Cranae trivittata rufipes* Ramme.

Fig. 8. *Hygracis malabaricus* n.sp.

Fig. 10. *Zeylonacris continentalis* n.sp.

margin with a row of black tubercels; metazona black; median keel forming a crest, with its highest point in the metazona, in the prozona irregularly incised, in the mesozona more deeply incised and forming a blunt tubercel in its anterior part, in the metazona still more elevated and at its top forming a sharply pointed triangular tubercel, from there suddenly lowered, with still some small pointed tubercels on the metazona and terminating into the middle of the hind margin into a yellow spine; transverse sulci distinct, between the submarginal, first, second and principal sulcus yellow with rows of black tubercels; hind margin of pronotum in the middle partly yellow; lateral lobe yellow in the anterior part, posterior part black; surface of pronotum granulose, lower margin totally black.

Elytra olivaceous green, with a large yellowish white spot at the base, reaching from the posterior margin to nearly the anterior one and with a small black spot at the insertion of elytra; the basal yellow spot laterally bordered by an ill limited dark olivaceous green band, the remaining part of elytra olivaceous green. Wing infumated, except at the base where it is more hyalinous. Anterior and median legs dark olivaceous green, tarsi more blackish. Hind femur black, from above at the base with a large yellowish white spot, spines black. Hind tibia black with the spines black. Hind tarsi black from above, pulvilli brownish.

Abdomen from below dark olivaceous black or black, tip of prosternal tubercel reddish yellow, mesosternum in the middle yellow with a small dark point on each side, strongly contrasting with the colour of this part of the sternum. Tergits of the abdomen lighter coloured, sternits dark olivaceous green, supra analplate of the same colour. Cercus lamellate, in the middle angulately bent inwards, top of cercus dilated and truncate. Female unknown. (Figs. 1, 2).

Length of body	18	mm.
,, ,, pronotum	6	,,
,, ,, elytron	12	,,
,, ,, hind femur	11	,,

Geographical distribution: East Borneo (Tabang, Bengen riv. 125 M.).

Holotype ♂, Tabang, Mus. Leiden.

This species differs from the genotype (*macula-lutea*) in the form if the crest of pronotum and in the colour, especially in the yellow meso-

Fig. 2. *Althaemenes tabanga* n.sp.

sternum, which in all the other known species is unicolorous with the colour of the abdomen from below. From *borneensis* it differs besides by the lack of a black quadrate spot at the insertion of antennae. From the two other known species only the female is known. Specimens of this genus are rare in collections and generally only present by male or female.

BHUTANACRIDELLA nov. gen.

M a l e: Body slender, finely rugose. Antenna slender, joints elongate, incomplete in the specimen before me. Head as seen from above; shorter than the pronotum, face reclinate, fastigium of vertex narrowed between the eyes, declive, terminating into a pentagonal, in the middle somewhat lowered, shallowly rugose area with a short median carinula; frontal ridge narrow, shallowly sulcated, margins obtuse, not quite reaching the clypeal margin; about in the middle, below the median ocel, cut by a distinct transverse sulcus; on both sides of its margins, just above this sulcus with a more or less distinct tubercel, the remaining part of the frons rugosely punctate. Lateral facial keels distinct, straight, in the upper half nodulose, in the lower part more acute.

Cheeks with a row of shallowly indicated, transverse rugosities and partly subsmooth.

Pronotum with the sides parallel, rugosely punctate; median keel only indicated, lateral keels absent; anterior margin rounded, in the middle somewhat concavely incised, posterior margin more broadly rounded; principal sulcus behind the middle; lateral lobe longer than high, lower margin from the middle ascendant to the anterior margin and there somewhat concavely excised. Elytra rudimentar, lateral, reaching the hind margin of second abdominal tergit; oval with the apex rounded. Anterior and median legs relatively stout. Hind femur overreaching the top of abdomen, somewhat flattened, all margins smooth; kneelobes simply rounded. Hind tibia with a row of 9 inner spines, there are 7 outer spines, but no outer apical spine. Second joint of hind tarsi short, third joint about as long as the two others together.

Prosternal spine short, conical, apex obtuse (where the specimen was broken, I had to repair it. By doing so, the glue after drying, occupied the whole of the prosternum, and study of this spine was no more possible. But happily I made its description before repairing).

Mesosternal lobes about as long as broad, inner margin rounded and separated by a small interspace. Metasternal lobes also separated.

Supra analplate broad ,its surface with some shallow, longitudinal impressions or grooves, posterior margin triangularly expanded. Cercus reaching a little beyond the supra analplate, slightly curved, at the apex forked. Subgenital plate short, curved up, apex obtusely rounded. Abdomen from above with a fine median keel. Only the male is known.

This genus is remarkable by the frontal ridge interrupted by a distinct transverse sulcus and the forked top of male cercus.

BHUTANACRIDELLA ELEGANS nov. spec.

General coloration olivaceous brown and yellow. Antennae brown. Vertex brown, on both sides with a broad black postocular band. Face and cheek more yellowish brown or yellowish, mouthparts darker coloured. Pronotum with the disc reddish brown, lateral lobe yellowish brown, on both sides of the disc with the continuation of the black postocular band, but less broad and becoming more faint posteriorly, in the metazona only indicated by a pair of small blackish dots. Elytron brown, its insertion indicated by a very small black dot. Epimerum of meso- and metathorax with the margins partly bordered with a fine black stripe.

Anterior and median legs yellowish with dispersed black spots and stripes. Hind femur yellowish, with an indication of a paler yellow praegenicular ring; the keels from above, marginated with black, the carinulae on the outer and partly on the inner area blackish brown, strongly contrasting with the yellow underground; knee black. Hind tibia and tarsi yellow, spines black; tibia at the insertion black.

Sternum brown. Abdomen from above yellowish, the segments bordered with brown or blackish brown at their posterior margin and with a longitudinal black narrow stripe along the sides; supra analplate more blackish brown, cerci black, subgenital plate yellow, contrasting with the more brown underside of the abdomen.

Female unknown. (Fig. 3).

	♂	
Length of body	21	mm.
,, ,, pronotum	6	,,
,, ,, elytron	3,5	,,
,, ,, hind femur	12	,,

Geographical distribution: Bhutan (Maria Basti) Holotype ♂. Mus. Paris. Formerly it was in the collection of Mr. R. Oberthür.

Fig. 3. *Buthanacridella elegans* n.sp.

BUMACRIS GEORGICA nov. spec.

Male: Antennae missing in the specimen before me. Face distinctly reclinate, frontal ridge and lateral keels very distinct, straight and relatively strongly pronounced; fastigium of vertex rounded, margins thickened. Disc and lateral lobes of pronotum rugosely punctured, transverse sulci distinct, but shallowly grooved, second and third one percurrent on the lobes and nearly reaching its lower margin. Elytra and wings well developed and reaching the top of abdomen and nearly the apex of hind femur.

General colour olivaceous green or brown. Frons and cheeks dark yellowish, margins of frontal ridge dark brown, on both sides of this ridge in the basal half with an ill limited blackish brown spot a little above the clypeal margin, clypeus dark brown, mandibles black. Behind the eyes with a blackish-brown postocular band, percurrent on the upper part of the lateral lobe of the pronotum; vertex dark yellowish, with a broad median blackish brown band percurrent on the disc of pronotum. Pronotum dark yellowish, with the above described black bands on the disc and on the lateral lobes.

Elytra greenish of greenish blue, along the anal vein with a yellow stripe. Wings light bluish. Anterior and median legs with the femora dark red, tibiae and tarsi olivaceous green or brown. Hind femur dark red, apex black with an indication of an incomplete yellow praegenicular ring. Hind tibiae olivaceous green, spines with black tips, tarsi more olivaceous brown. Sternum and abdomen yellowish brown.

Female unknown. (Fig. 4).

Fig. 4. *Fumacris georgica* n.sp.

	♂	
Length of body	25	mm.
,, ,, pronotum	7	,,
,, ,, elytron	21	,,
,, ,, hind femur	18	,,

Locality: Solomon Isl. (Isl. S. George) Hombron 1841. Holotype Mus. Paris.

CRANAE TRIVITTATA - RUFIPES[2]) Ramme.

Female: General coloration yellow and black. Antennae broken in the specimen before me, basal and first joint yellow from above, olivaceous black from below. Head with the frons olivaceous yellow or green, margins of the short frontal ridge and lower part of lateral keel and a narrow streak below the eye black. Clypeus dirty yellow, with a more or less quadraangular, median spot at the base black. Labrum yellow, in the middle also with a black spot. Mandibles black, at the base on the outer margin with one or two yellow spots.

Vertex yellow, in the middle on both sides with an indication of an oblique longitudinal olivaceous green band, more or less distinctly indicated; fastigium of vertex finely marginated with black; behind the eyes with a broad, black postocular band percurrent on the sides of meso-

[2]) W. Ramme, Mitt. Zoolog. Mus. Berlin, Bd. 25, p. 92.

and metasternum; Pronotum from above with a broad black median band from the anterior to the posterior margin, on both sides of this band yellow; lateral lobe in the upper part with the already indicated black postocular band, below this band yellow, lower margin also yellow.

Elytra yellow, with the anterior and posterior margin broadly bordered with black, the extreme tip however yellow.

Anterior and median femora red with the apex and kneelobes olivaceous green, tibiae and tarsi also olivaceous green. Hind femur yellow with the knee black, preceded by a yellow praegenicular ring and an incomplete bluish ring, lower area olivaceous green; the oblique, transverse ridges on the area externo-media blackish green and strongly contrasting with the yellow underground of this area. Hind tibia and tarsi dark olivaceous green to black, there is a narrow, yellow basal ring on the tibia.

Sternum and abdomen from below brown, margins of abdominal segments bordered with dark brown. Abdomen from above yellow, segments bordered with black; supra analplate yellow.

This female specimen bears at the top of the abdomen still the spermatophore and must be caught short after the moment that it was attached there by the male (Fig. 5).

Male unknown.

	♀	
Length of body	30	mm.
,, ,, pronotum	5,5	,,
,, ,, elytron	7,5	,,
,, ,, hind femur	14	,,

Locality: New Guinea (Triton Bay). Jacquinot 1841. Mus. Paris.

EUCOPTACRA BORNEENSIS nov. spec.

Female: General coloration yellowish brown. Antennae reaching a little behind he posterior margin of pronotum, yellowish brown, apical half darker coloured, apical joints light yellowish. Head and pronotum uniformly brown. Frontal ridge in the upper part very distinctly widened.

Principal sulcus of pronotum in the middle. Elytra brown without distinct well limited darker spots, there is a dark brown streak along the principal veins at the base; apex rounded. Wing hyalinous, somewhat slightly infumated at the apex. Anterior and median legs of the general coloration, without dark points; hind femur also yellowish brown, outer and upper areae with a faint indication of a dark band in the middle and near the base, inner area yellowish (not red), with some black points; knee darker coloured, black to blackish brown. Hind tibia yellowish brown, somewhat darker near the apex, spines with black tips. Fig. 6. Male unknown.

Sternum and abdomen of the general colour.

This species resembles *E. praemorsa* Stål (Fig. 7), but differs in the broader lateral lobe of pronotum; the prosternal spine being conical with the apex pointed and the white-tipped antennae.

	♀	
Length of body	21	mm.
,, ,, pronotum	6,5	,,
,, ,, elytron	20	,,
,, ,, hind femur	14	,,

Geographical distribution: Isl. Laut., S.E. of Borneo, 19 Nov. '09, coll. Friederici. Süd-see Exped. Wolff 1909, no. 266. Holotype ♀. Only the holotype is known. Mus. Frankfurt a. Maine.

HYGRACRIS MALABARICUS nov. spec.

I have before me a female specimen, that I take to be a new member of this genus. There are some differences as to the form of the prosternal spine. This spine is small, conical, apex subacute, thickened at the base and lying a little behind the anterior margin of prosternum. The bad state of this specimen does however not permit to make definite conclusions as to the morphology in this area of the body.

General coloration olivaceous brown with yellow longitudinal bands. Frons in the middle with a broad yellow band, running across the frons and cheeks on to the middle of lateral lobe of pronotum and terminating as yellow spots on the epimerae of meso- and metapleura. Anterior margin of clypeus on both sides with a large yellow spot. Mandibles at the base with a light olivaceous yellow spot, top of mandibles brownish black. Labrum blackish brown, anterior margin marginated with yellow. Palpi greenish olivaceous or yellowish. Vertex blackish, on both sides with a narrow, longitudinal yellow stripe, beginning at the top of fastigium of ver-

tex, posteriorly running along the sides of disc of pronotum. Disc of pronotum olivaceous green; lateral lobe in the upper part and along the lower margin blackish brown.

Elytron in the basal half brown, anal area bluish brown, apical half lighter coloured. Wing light bluish, apex and part of hind margin infumated.

Anterior and median legs light olivaceous green, basal half of femora reddish, tibiae with some dark spots. Hind femur yellowish, knee blackish, kneelobes lighter coloured, base of femur red, area externo media red at the base with three oblique brownish black bands, percurring into the upper area and partly on the inner area; lower area for the greater part red; inner area yellowish red. Hind tibia olivaceous brown to black, with a yellow praegenicular ring, spines with black tips. Hind tarsi brownish. Sternum and abdomen olivaceous brown (Fig. 8).

	♀	
Length of body	25	mm.
,, ,, pronotum	5,5	,,
,, ,, elytron	14	,,
,, ,, hind femur	12	,,

I made formerly a photo of the male, but this specimen is lost, it was from the same locality as the female.

Geographical distribution: Côte de Malabar, India. Only the holotype is known, (Mus. Paris).

It was collected by F. Laporte, who represented his country in India. Through the medium of J. V. Audouin, professor of Entoologie in Paris, the specimen arrived in the collection.

PELECINOTUS CRISTOBTUSA nov. spec.

Female: Size medium, form robust. Head on vertex and cheeks subsmooth with only some small impressed points, frontal ridge and face rugosely punctured. Frontal ridge shallowly concave, its carinae widest apart between the antennae, than, rather suddenly, opposite the median ocellus narrowed and from there parallel to the clypeal margin. Antennae missing in the specimen before me. Eyes long oval, but short, the anterior margin substraight, posterior margin curved.

Pronotum with the median carina nearly horizontal, obtuse and without teeth or spines, not crenulated or serrate. Sides of crest rugosely punctate with some round, small tubercels; in the prozona near the principal sulcus the rugosities separated by a thin lamina of translucent chitin, over a certain surface. Transverse sulci well-marked. Lateral lobe in the prozona in the upper part with a more smooth and elevated, oblique area, not sharply limited. Hind margin of pronotum somewhat thickened, humeral angle very evenly indicated.

Elytron oval, with the margins gradually narrowed towards the obtusely pointed apex, reaching not beyond the third abdominal tergit. Alae rudimentar. Pleurae coarsely and rugosely punctured. Tergits medially somewhat carinate and shallowly punctured; sternits also shallowly punctured.

Prosternal spine short, conical, apex subobtuse. Anterior and median legs stout, anterior femora coarsely but shallowly punctate. Hind femur stout and reaching a little beyond the abdomen with the upper keel strongly dentate, area supera broad, carinula externa-superior and -inferior tuberculate; carina inferior more sparsely dentate, kneelobes obtuse. Hind tibia from below with a row of 8 external spines (no apical one) and 10 somewhat longer internal spines. Supra analplate long triangular, at the base with a median impression, apex obtusely pointed. Valves of ovipositor with the margins subsmooth or subcrenulate, apex hooked. Cercus absent in the specimen, before me. Subgenital plate also defect.

General coloration brown (in vivo green?). Hind tibia blackish brown, spines lighter coloured at their apex.

This species can be distinghuised at once from all the other known species by the crest of the pronotum being without teeth and obtuse on its whole length. Only the female is known and unique (Fig. 9).

	♀	
Length of body	33	mm.
,, ,, pronotum	22	,,
,, ,, elytron	10	,,
,, ,, hind femur	18	,,

Geographical distribution: India (Pondichery?) *Holotype* Mus. Paris.

ZEYLONACRIS CONTINENTALIS
nov. spec.

M a l e : Head a little broader than the pronotum, face subvertical. Fastigium of vertex strongly declive, separated from the vertex by a transverse sulcus. Between the eyes there is a small, but distinct median carinula, posteriorly passing into a low ridge or very shallow sulcus till about the middle of vertex; anteriorly it terminates at the transverse sulcus.

The fastigium is broader than long, from above with an indefinite median carinula, on both sides of this carinula pitted, margins irregularly puncate and passing into a round bow in the frontal ridge. Vertex irregularly punctate. Frontal ridge with the margins, which are irregularly punctate, gradually narrowing downwords, not quite reaching the clypeal margin; below the median ocel it is shallowly sulcate, above the median ocel rugosely punctate. Face and cheeks irregularly rugosely punctate, without distinct lateral keels. Clypeal margin rugosely punctate. Antennae missing in the specimen before me.

Pronotum short, rugosely punctate, anterior margin in the middle triangularly incised, posterior margin straight or slightly rounded; transverse sulci broad and deep, all of them crossing the disc and most of them also the lateral lobe; metazona narrow, this area more finely punctate on the disc and on the lobes; lower margin of lateral lobe a little behind the middle with a convex sinuosity. Prosternal spine is a simple, rounded tubercel, somewhat compressed on both sides, top rounded. Meso- and metanotum just as the pleurae sparsely and obsolescently punctured. They are separated by a wide sulcus. Foramina auditoria present, but small. Abdominal tergits irregularly punctured. Mesosternal lobes somewhat broader than long, their inner margins not quite touching each other posteriorly; metasternal lobes contiguous.

Anterior and median legs stout, femora somewhat flattened, their surface rugged, tibiae and tarsi short, relatively broad, the margins of the acetabulum of median legs distinctly thickened. Hind femur about as long as the abdomen, somewhat flattened, all margins smooth, carinae poorly developed, kneelobes obtuse. Hind tibia with a row of 10 inner and 7 outer spines, including the small apical spine. Hind tarsi with the joints of about the same length. Tibiae and tarsi are pilose.

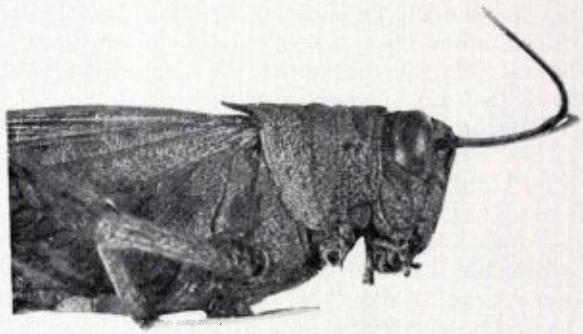

Fig. 6. *Eucoptacra borneensis* n.sp.

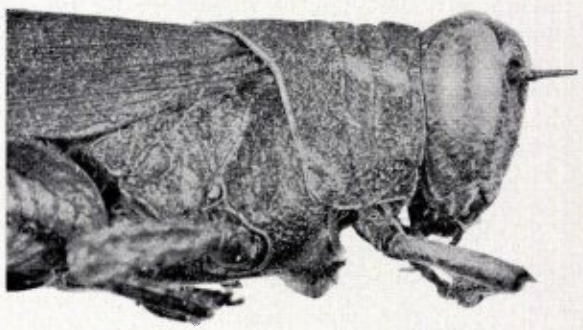

Fig. 7. *Eucoptacra praemorsa* ♀ Stal.

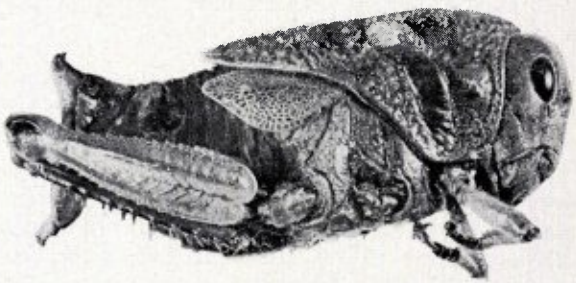

Fig. 9. *Pelecinotus cristobtusa* n.sp.

Supra analplate as broad as long, triangular, apex obtuse. Cercus overreaching the supra analplate only a little, somewhat conical, apex obtuse and slightly curved inwards. Subgenital plate conical, slightly compressed laterally, its apex obtusely rounded.

General coloration dark brown. Sides of abdomen with a blackish band. Inner and lower inner area of hind femur black, knees more reddish brown. Hind tibia bluish black, spines black. Hind tarsi lighter coloured, more yellow-

ish brown. Female unknown (Fig. 10).

	♂	
Length of body	27	mm.
,, ,, pronotum	4	,,
,, ,, hind femur	14	,,

Geographical distribution: India meridionale (Pulneys), envoi du Père Castets. Holotype ♂, Mus. Paris.

This is the first species of the genus *Zeylonacris* found on the continent, two species are known to occur in the isle of Ceylon.

BOEKBESPREKING

Panorama der Wereld. Een geografische verkenning onder redactie van A. C. de Vooys en R. Tansma. Deel III: Afrika - Amerika - Australië. Uitg. Romen & Zonen, Roermond en Maaseik, 1961. 535 bladz. Prijs ƒ 29,50 per deel bij intekening op de 3 delen.

De delen I en II van dit belangrijke boek zijn ruim een een jaar geleden verschenen (Natuurhist. Maandbl. 1961, p. 23). De redactie en haar medewerkers stonden voor een zeer moeilijke taak, vooral wat Afrika betreft, nl. een analyse te maken van de tegenwoordige situatie. Zij hebben deze taak op voortreffelijke wijze volbracht, al kon het niet uitblijven, dat een enkele keer tijdens het drukken van het boek het geschreven woord door de feiten werd achterhaald. Tanganjika, dat in 1918 door de Volkenbond aan Groot Brittannië als voogdijgebied werd toegewezen, heeft sinds kort zijn onafhankelijkheid verkregen.

Wij moeten ons bij de bespreking van dit werk een grote beperking opleggen. Gelijk reeds gezegd bij de bespreking van Deel I en II, ligt het zwaartepunt van dit boek op de regionale behandeling, en dan begrijpt men van zelf, dat een bespreking als deze niet meer is dan een wandeling door de drie werelddelen.

Deel II eindigde met het Midden-Oosten, deel III begint met Afrika. Wil men iets begrijpen van de ontzaglijke problemen, die hier aan de orde zijn, dan moet men te rade gaan bij dit boek, al zal de snelle opeenvolging van de feiten ons nog vaak voor grote verrassingen plaatsen, zoals de Kongo geleerd heeft. De toestand in Algerië zal men beter kunnen beoordelen, wanneer men iets gelezen heeft over de historische ontwikkeling en de tegenwoordige structuur van dit grote gebied, dat terecht een Franse schepping kan genoemd worden. In dit overwegend agrarisch land streeft men naar 47% industrieland, wat ook best mogelijk is na de ontdekking van de rijke energiebronnen in de Sahara, maar het in 1958 opgestelde tienjarenplan zal wel nooit verwezenlijkt worden.

Angola is de assepoester van Zuidelijk Afrika en de Unie van Zuid-Afrika de steen des aanstoots. Om de huidige toestand in de Unie goed te beoordelen, doet men goed de algemene beschouwingen over klimaat en bodem van Zuidelijk Afrika te lezen, want deze factoren zijn van grote invloed geweest op de vestiging der Boeren en het terugdringen van de Bantoenegers naar de reservaten. De Bantoegebieden zijn beklemd en benard. Na een historische inleiding, te beginnen bij Van Riebeek in 1652, geven de schrijvers op uitstekende wijze een analyse van de structuur van de Unie, zonder één factor te vergeten, maar zij wagen zich niet aan voorspellingen.

Van Afrika springt de redactie over naar Latijns Amerika, met zijn ook nu nog zo belangrijke Spaanse en Portugese erfenis, zijn welvaart voor weinigen en armoede voor velen. Het is onmogelijk hierop in te gaan; de geïnteresseerde lezer zal zelf zijn weg wel vinden. Dit boek zal hem als gids niet in de steek laten.

Een volmaakt andere wereld begint niet benoorden het Panamakanaal — de traditionele grens tussen Noord- en Zuid-Amerika —, maar benoorden Mexico. Het spreekt vanzelf, dat de grootste ruimte wordt gereserveerd voor de U.S.A., in overeenstemming met de betekenis van dit land. Is het gehele boek goed geïllustreerd, in het bijzonder valt dit op bij de behandeling van de U.S.A. Daarna volgen Canada en Alaska.

Het laatste gedeelte van het boek behandelt de eilandenwereld in de Grote Oceaan en Australië, terwijl het „Panorama der Wereld" wordt afgesloten met een analyse van Nieuw-Zeeland.

Deze korte bespreking is natuurlijk niet evenredig aan de waarde van dit boek. Het was alleen de bedoeling er de aandacht op te vestigen en de wens uit te spreken, dat velen hier hun licht zullen opsteken.

Wie van een bepaald land een diepgaander studie wil maken, vindt aan het einde van dit boek een lijst van recente literatuur.

K.

Grenzen der geologische wetenschap. Rede uitgesproken bij de overdracht van het rectoraat der rijksuniversiteit te Groningen op 18 sept. 1961 door Ph. H. Kuenen. J. B. Wolters, Groningen. Prijs ƒ 1,50.

Het hoofdthema van deze rede is het bepalen van de grenzen tussen de geologie en de andere natuurwetenschappen (meteorologie, geofysica, geomorfologie enz.). Die grenzen zijn niet altijd nauwkeurig aan te geven. Vaak hebben er grensoverschrijdingen plaats, die leiden tot grensincidenten. Het talrijkst zijn deze incidenten op de grens van geologie en geomorfologie of de leer van de uitwendige vorm van de aarde. In wezen is de gemorfologie een geologische aangelegenheid, maar toch heeft de geograaf de geomorfologie vrijwel geheel geannexeerd. De geoloog draagt hier zelf de schuld van, omdat hij te weinig belangstelling heeft getoond voor de geomorfologische problemen. De geograaf is echter steeds verder binnengedrongen in het gebied van de geoloog. De geografen houden zich zelfs bezig met het IJstijd-probleem en produceren daarover, zoals de spreker moet erkennen, belangrijke publicaties. Het dreigend overschot aan geologen dwingt de geoloog het verloren terrein terug te winnen. De oliegeologen zijn er reeds mee begonnen door hun steeds groeiende belangstelling voor de sedimentvorming, een der fundamentele processen der geomorfologie.

De studie van de fossielen heeft altijd behoord tot het domein van de geoloog, maar nu beweert de bioloog, niet geheel ten onrechte, dat hij beter fossielen