

Op donderdag 31.5.56 hoorde ik tussen het striukgewas en het riet langs de Jeker tegenover het Hertenkamp een vogel zingen. Naar het geluid te beoordelen moest ik aannemen, dat het hier een *Kleine Karekiet* betrof. Later zag ik de vogel ook tussen het riet klauteren en het uiterlijk van het diertje, vooral de donkere kleur van de poten verstevigde mijn mening, dat het een *Kleine Karekiet* was. Op j.l. maandag 2 juli was hij nog steeds ter plaatse. Betrof het hier soms een broedvogel?

De *Spreeuwen* beginnen 's avonds hun slaapplaats ten N.W. van Limmel, ten O. van de Sluis in het Juliana-Kanaal weer te betrekken. Op zaterdag 23 juni j.l. trokken na 7 uur 's avonds reeds enkele kleine groepjes, in totaal circa 100 exemplaren, naar de gezamenlijke slaapplaats.

Op zaterdag 30 juni '56 zag ik in een perceel jong dennenbos in België op 3 km ten NW van Tournebride een *Nachtswaluw*. Aan de bekende snorrende zang te oordelen waren er 2 ter plaatse aanwezig. Reeds op zondag 3 juni '56 meende ik om ca 4 uur n.m. ter plaatse een korte strofe zang van de *Nachtswaluw* te horen. Deze waarneming van 9.20 uur 's avonds bevestigde dit wel zeer mooi.

Hier is een mooie gelegenheid om deze in onze omgeving zeldzame vogel te leren kennen en dat op een afstand van slechts 9 km van het centrum van Maastricht. Het is ten minste wel aan te nemen dat deze vogels voor deze zomer hier een vaste verblijfplaats hebben.

De heer *Genemans* heeft het volgende meegemaakt: In de boerderij van de heer *Vaassen* te Amby was per ongeluk een hamster in de kelder terecht gekomen. Vlak boven de vloer stonden een paar kisten. De hamster heeft onder de kisten een nest gemaakt van het papier, dat hij in de kelder gevonden had. Het papier was flink aangestampt. Niet lang heeft de hamster er plezier van kunnen beleven, daar de hond een einde maakte aan zijn leven.

De heer *Dijkstra* deelt mede, dat de uit Midde-Azië aangevoerde plant *Potentilla recta* L. zich nog altijd bevindt op de plaats — langs de spoorweg Heerlen-Schaesberg, — waar Dr de Wever haar gevonden heeft in 1908, en dat zij zich aldaar ook niet verder heeft uitgebreid (Jaarboek Natuurh. Genootschap 1915, blz. 45).

FORAMINIFERA FROM THE CRETACEOUS OF SOUTHERN LIMBURG, NETHERLANDS. XX.

THE DEVELOPMENT OF *COLEITES RETICULOSUS* (Plummer).

by J. HOFKER

In the upper layers of Basbeck and Hemmoor (Germany) and in the Craie Grise of North Eastern Belgium, all with similar faunae, which were characterised by *Wicher* as "Zone mit *Coleites* ohne *Stensiöina*", which level must be of Middle Maestrichtian age, and also, more rarely in the Cr 3c of Holland (Quarry near Mesch in Southern Limburg), the first forms of *Coleites* appear. These forms with nearly flat dorsal side and more convex ventral side show all characters of a small slightly ornamented *Pseudoparrella* with sutural aperture. At the dorsal side the ornamentation consists of some honeycomb structures at the centre, and sutures which show irregularly branching ridges. At the ventral side only some honeycombs at the centre are found, and the ornamentation here may be nearly invisible. I have described these forms from Basbeck as *Pseudoparrella ornata* Hofker (in press).

In the upper parts of the Craie Grise in Belgium, which part could not yet be detected in Holland, the dorsal side becomes more and more convex, so that in the upper layers of this horizon the tests are nearly biconvex. At the dorsal side the ornamentation develops more and more, and also at the ventral side not only the centre, but also the peripheral parts begin to show the ridges along the sutures of the chambers.

All these forms are found in the horizons in which *Marginotruncana pauperata* Hofker and *Bolivinoides australis* Edgell having tendency to develop into *Bolivinoides gigantea* Hiltermann und Koch, are dominant, and in which also *Neoflabellina reticulata* (Reuss) is found.

In the lowest parts of the Cr 4 in North Eastern Belgium and in South Limburg in Holland, *Coleites reticulosus* is somewhat more developed; both sides which are equally convex now, show the reticular ornamentation highly developed. At the dorsal side the sutures of the last formed chambers yet are distinguishable among the honeycomb structures. At the ventral side only the wall of the last formed chamber is relatively smooth. These forms are also found

in the Ma. They show a sutural aperture also.

In the lower Mb the species gets a more oval form, the tests are somewhat thicker, the ridges between the honeycombs are more prominent and the sutures at the dorsal side hardly recognisable. Such forms also were found in the Tuffeau de St. Symphorien in Belgium. Then, in Holland, no *Coleites reticulosus* is found during Mc-Md-Time, but the species is present, mainly in the form in which it is found in the Lower Mb, in scattered specimens in the samples of the Danish Danian. The aperture becomes areal. Once more the species reappears abundantly in the samples of the layers covering the uppermost Md, the lowest Paleocene. Here the specimens are often large, always of oval form, as has been found by Plummer in the Midway of Texas, and highly ornamented. But, between the highly ornamented forms also very small specimens are found, once again of more rounded shape, with only small pits on the surface. May be that those forms are the same as have been mentioned by Broten from the Swedish Paleocene as *Coleites danicus*. The aperture in adult normal specimens is totally areal.

The highest development of the species seems to be that found in the Paleocene of Vincentown, New Jersey, America, where the specimens reach a fine and more regular ornamentation, covering the whole test. Here also the specimens are oval in form. This highly developed forms are also found in the Tuffeau de Ciply and the Montian, younger lower Paleocene, in Belgium and in the shaft III of the mine Maurits.

This gliding development of *Coleites reticulosus* gives us a tool for finer stratigraphy, as follows:

Craie grise, Cr 3 c: specimens rounded, at dorsal side sutures clearly visible, honeycombs at ventral side only in the centre. Dorsal side flattened. Aperture sutural. Middle Maestrichtian.

Lowest Cr 4 and *Pseudotextularia*-zone: specimens rounded, biconvex. Ornamentation at dorsal side total, at ventral side nearly total with ridges along the sutures. The aperture becomes areal. Upper Maestrichtian.

Lower Mb and danish Danian: individuals more oval in shape. Ornamentation with strong

ridges, tests biconvex; ornamentation covering the whole surface. Specimens double as large as those of the Craie grise. Aperture areal.

Lower Paleocene: Specimens of the normal form strongly ornamented, sutures hardly visible, tests oval, biconvex. A second species is rarely found, with very slight ornamentation, biconvex but otherwise resembling the specimens of the beginning of the development of the group. In Texas and New Jersey in America the ornamentation reaches its utmost development. Specimens often very large for the species. Aperture areal.

Tuf. St. Symph. Tuf. de Ciply (Tuffeau de Ciply and Montian). Here the species shows the large tests and the high development of the ornamentation also characteristic for the Vincentown formation. Aperture always areal.

In this way the development of *Coleites reticulosus*, from its most primitive form *Pseudoparrella ornata* up to the most typical paleocene forms give us a good instance of markers for the upper Maestrichtian, the Danian and the Paleocene, as already has been suggested by Marie (Sur la valeur stratigraphique du genre *Coleites* Plummer; C. R. S. Soc. géol. France, No. 3, p. 20, 1943).

Figures.

All figures have been enlarged $\times 60$. In each case three sides of specimens have been drawn, at the left the dorsal side, at the right the ventral one, in the middle the apertural face (in fig. 2 the highest figure is the dorsal side).

1. Drilling at Glons, Belgium, 11 m below the bottom of the quarry; craie grise, lower Upper Maestrichtian.
2. Same locality, 9 m below the bottom; lower Upper Maestrichtian.
3. Same locality, 2 m below the bottom, boundary craie grise and Cr 4, near the uppermost Maestrichtian.
4. Quarry at Glons, Belgium, 126,50 m above sea-level. Cr 4, uppermost Maestrichtian.
5. Quarry of Lannay, lowermost Mb, Belgium. Sample 166.
6. Quarry of Curfs, near Houthum, South Limburg, Holland. Lowermost Paleocene.
7. Shaft of mine Maurits, III; Limburg, Holland, 199,50 m below surface. Tuffeau de Ciply, top.
8. Same locality, 183 m below surface, lower Montian.



