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PRELIMINARY NOTE ON THE OSTRACOD FAUNAS OF THE BORING ALLIANCE-28 IN SURINAM (DUTCH GUIANA)

ELLY J. NOORDERMEER[1]) & C.W. WAGNER[1])

Ostracod faunas from twenty-nine core samples of boring Alliance-28 were received for detailed examination through the courtesy of Dr. J.H. van Voorthuysen of the Geological Survey of the Netherlands. (van Voorthuysen, this issue p.111).

The few samples in the upper part of the well (12.5 m, 15 m, 216.20 m) contain poor undiagnostic ostracod faunas; they are not further discussed here. The faunas from the interval 258.85–321.80 m however, consist of abundant, mainly well ornamented forms (chart 1). On foraminiferal evidence this interval is Paleocene in age.

Specific determination of the ostracods was handicapped by the fact that in ostracod literature good figures and descriptions of holotypes are rare. This has caused much confusion in ostracod taxonomy. Superficial examination and determination as well as poor illustration of ostracods by many authors has further aggravated this situation and has led to a chaotic taxonomic state comparable to that described by Boltovskoy for Foraminifera (Twilight of Foraminiferology, 1965). Therefore, the only way to arrive at reliable specific determination is to compare the material with holotypes. It seemed promising to compare the Surinam ostracods with holotypes described from the Lower Tertiary of the Gulf Coast and Caribbean areas. This has kindly been done for many types of our material by Prof.Dr. W.A. van der Bold of the Louisiana State University (U.S.A.). From this comparison it resulted that not many elements of the Gulf Coast fauna are represented in the Surinam material. It has some similarity but no real identity with Lower Tertiary faunas of Guatemala. This is also the case for Nigerian and Niger Paleocene faunas which the authors compared with the Alliance-28 ostracods. It therefore seems that the latter fauna is intermediate between the faunas from Guatemala and those of western Africa as described by Apostolescu (1961) and Reyment (1960, 1963). The authors also compared the Surinam material with the Paleocene forms described by Drooger from French Guiana (Drooger, 1960). Several of Drooger's forms are identical to forms encountered in the upper part of the Paleocene interval in Alliance-28. Drooger has referred many of these forms to species described from the Gulf Coast or the Caribbean area, but most of his identifications were not supported by v.d. Bold's holotype comparison.

In view of all the above, it may be concluded that many of the Surinam forms represent new species which should be described and named. The present publication being a preliminary note on the Paleocene ostracods of Alliance-28 only gives a "tableau de la troupe" chart of the faunas. The "species" of which representatives will be deposited in the collections of the Geological Survey of The Netherlands, are here presented in open nomenclature. A photograph of a left or right valve of each "species" has been included on the distribution chart. This gives an idea of the morphological aspect of the assemblages.

The distribution chart shows that biostratigraphically the interval 258.85–321.80 can be broadly subdivided into three ostracod zones:

258.85–275.50: *Clithrocytheridea* 1 assemblage zone
275.50–288.10: *Jugosocythereis* 1 – *Eucytherura* 2 concurrent range zone
301.35–307.50: *Hermanites* 8 range zone

[1]) Bataafse Internationale Petroleum Maatschappij N.V. (Royal/Dutch Shell Group), Den Haag.

List indicating enlargements of species shown on CHART 1

Bairdia 1	33 x	*Hermanites* 10	36 x
„ 2	41 x	„ 11	41 x
„ 3	29 x	„ 12	47 x
Brachycythere 1	31 x	„ 13	49 x
Buntonia 1	61 x	„ 14	50 x
„ 2	50 x	„ 15	41 x
„ 3	55 x	„ 16	39 x
„ 4	57 x	„ 17	36 x
Clithrocytheridea 1	61 x	„ 18	37 x
„ 2	28 x	„ 19	40 x
Cytherella 1	31 x	„ 20	35 x
„ 2	43 x	*Jugosocythereis* 1	40 x
Cytheretta 1	38 x	„ 2	33 x
Cytheropteron 1	82 5 x	„ 3	51 x
„ 2	65 x	*Leguminocythereis* 1	32 x
„ 3	66 x	„ 2	39 x
Eucytherura 1	69 x	„ 3	33 x
„ 2	68 x	*Occultocythereis* 1	50 x
„ 3	61 x	*Ostracoda* 1	82 x
Hemicythere 1	42 x	„ 2	81 x
Hermanites 1	46 x	„ 3	52 x
„ 2	50 x	„ 4	41 x
„ 3	57 x	„ 5	48 x
„ 4	30 x	„ 6	49 x
„ 5	46 x	*Paijenborchella* 1	188 x
„ 6	50 x	*Quadracythere* 1	43 x
„ 7	40 x	„ 2	41 x
„ 8	35 x	„ 3	33 x
„ 9	33 x	*Trachyleberis* 1	48 x

This zonation is naturally tentative and its validity can only be proven by the study of more Paleocene intervals in the area concerned. Drooger's Paleocene ostracod faunas of French Guiana seem to fall into the *Clithrocytheridea* 1 assemblage zone and the *Jugosocythereis* 1 – *Eucytherura* 2 concurrent range zone (D r o o g e r 1960, p. 466, see also our chart).

The abundance of well ornamented *Cytheridae* with strong amphidont hinge and well-developed eye spots indicates that the ostracod bearing parts of the Paleocene interval in well Alliance-28 were deposited in littoral to shallow marine environments (v a n M o r k h o v e n, 1962, p. 149). *Bairdiidae* are also commonly found but they are of no great help in environmental determinations.

As the environment of the ostracod bearing parts of this well appears to be constant it is probable that the above biostratigraphic subdivision is of time-stratigraphic value.

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