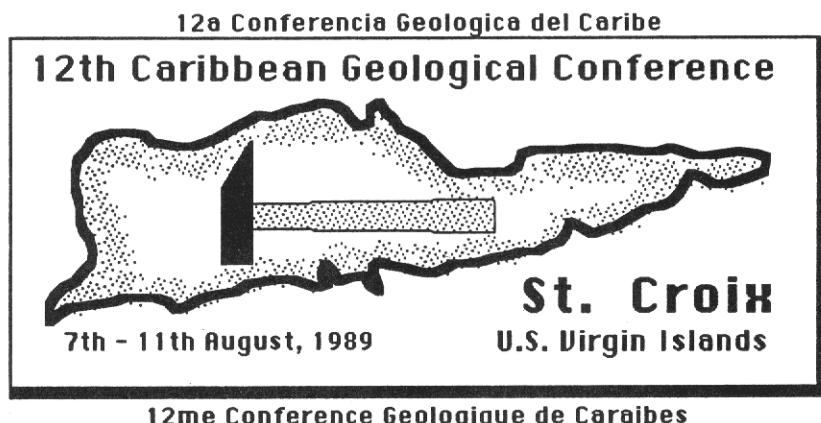


TRANSACTIONS OF THE 12TH CARIBBEAN GEOLOGICAL CONFERENCE

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SHORT REVIEW OF THE OSTRACODA OF THE MONTPELIER AND COASTAL GROUPS
OF JAMAICA

W. A. van den Bold

The Montpelier Group (see Steineck, 1981) contains a mixture of dominant bathyal taxa (Krithe, Abyssocypris, Argilloecia, Agrenocythere, Bradleya, Bythocypris, Cardobairdia etc., Table 1), minor outer neritic taxa (Costa, Cytheropteron, Loxoconcha (Palmoconchal), Trachyleberidea, etc.) and a sprinkling of inner neritic taxa (Aurila, Caudites, Hemicytherura, Loxoconcha (Loxocorniculum), Jugosocythereis, Orionina, Pokornyla, Procythereis?, Triebelina (Table 2). The neritic forms are probably derived from contemporaneous deposits on the shelf. However, in the Basal Spring Garden Formation (N8) some of them are clearly reworked from older deposits (indicated with X in Table 2 - note that these are all shallow water species). The increase of neritic species in N1-2 (Fig. 1) is probably due to uplift in the shelf area whereas the presence of deep water taxa such as Krithe reversa and K. trinidadensis indicates that no shallowing took place in the area of deposition and that it remained at bathyal depths. Also the redeposited species in the basal Spring Garden are apparently derived from N1-2 zone sediments.

In the Buff Bay Formation, after an increase of neritic forms in the Upper Spring Garden Formation and lower Buff Bay (N14), the number of neritic forms drops in the middle part (N15) and then increases again in the upper part, which increase continues in the San San clay and Bowden Formation, where it is probably related to an increase of land derived sediment (Fig. 1). Reduction of the larger Krithe species and the presence of small Krithe (K. dolichodeira) suggests upper bathyal deposition. Bathyal species continue to be present, but most of them disappear in the San San Clay (N18, 19). Radimella appears in the upper Buff Bay (N 17) in its normal position of appearance in the Caribbean.

No deeper water taxa are present in the Bowden shell bed (Bold, 1971) and the fauna here is typically inner neritic. However, above the shell bed in the Bowden Formation deeper water taxa (Cardobairdia, Messinella, Trachyleberidea, Ambocythere) return in a fauna that appears outer neritic. The same type of fauna persists in the Manchioneal Formation, but with an increased influx of inner neritic forms (Glyptobairdia, Triebelina, Uroleberis, Propontocypris) which suggests the vicinity of reefs. Based on the distribution of ostracodes the Bonny Gate and Lower Sign Formations of the Montpelier group appear upper bathyal,

upper Sign and lower and middle Spring Garden middle bathyal, Upper Spring Garden and lower and Middle Buff Bay upper bathyal, San San clay upper bathyal, upper San San, Bowden and Manchioneal outer neritic. In these deeper water deposits the biostratigraphy based on shallow marine ostracodes is rather unsatisfactory (see Table 2). In the Montpelier group the Bonny Gate and lower Sign formations belong to the Pokornyla poagi zone (P 19/18 -N5, Bold, 1983), with the Bonny Gate in the Loxoconcha (Loxocorniculum) lieneklausi-Triebelina howei zones. Note that Triebelina howei occurs here earlier than indicated by the boundaries of the zone (Bold, 1983, N3-4). The Spring Garden belongs to the Procythereis? deformis zone (N6-16). In the lower Coastal group more neritic forms occur and the zonation is more reliable. The upper Buff Bay and lower San San belong to the Radimella ovata subzone (N17-18) of the Radimella confragosa zone, and correlate with the Uppermost Cercado in the Dominican Republic and the Springvale of Trinidad. The Manchioneal belongs to the Radimella wantlandi zone (N22 - Recent).

Note on Nomenclature:

Pokornyla poagi Bold, new name
Aurila saginata (Stephenson), Butler,
1963, p. 74, pl. 2. fig. 19-21
Procythereis saginata (Stephenson), Bold,
1965, p. 396; 1975, table 4.
Trachylebereis saginata (Stephenson,
Lubimova and Sánchez. 1974, pl. 14, fig.
6, 6a.
Pokornyla "saginata" (Butler, not
Stephenson), Bold, 1983, p. 400, 401, 407,
409.
Not Hemicythere saginata Stephenson, 1944,
p. 158, pl. 28, fig. 16, 17.

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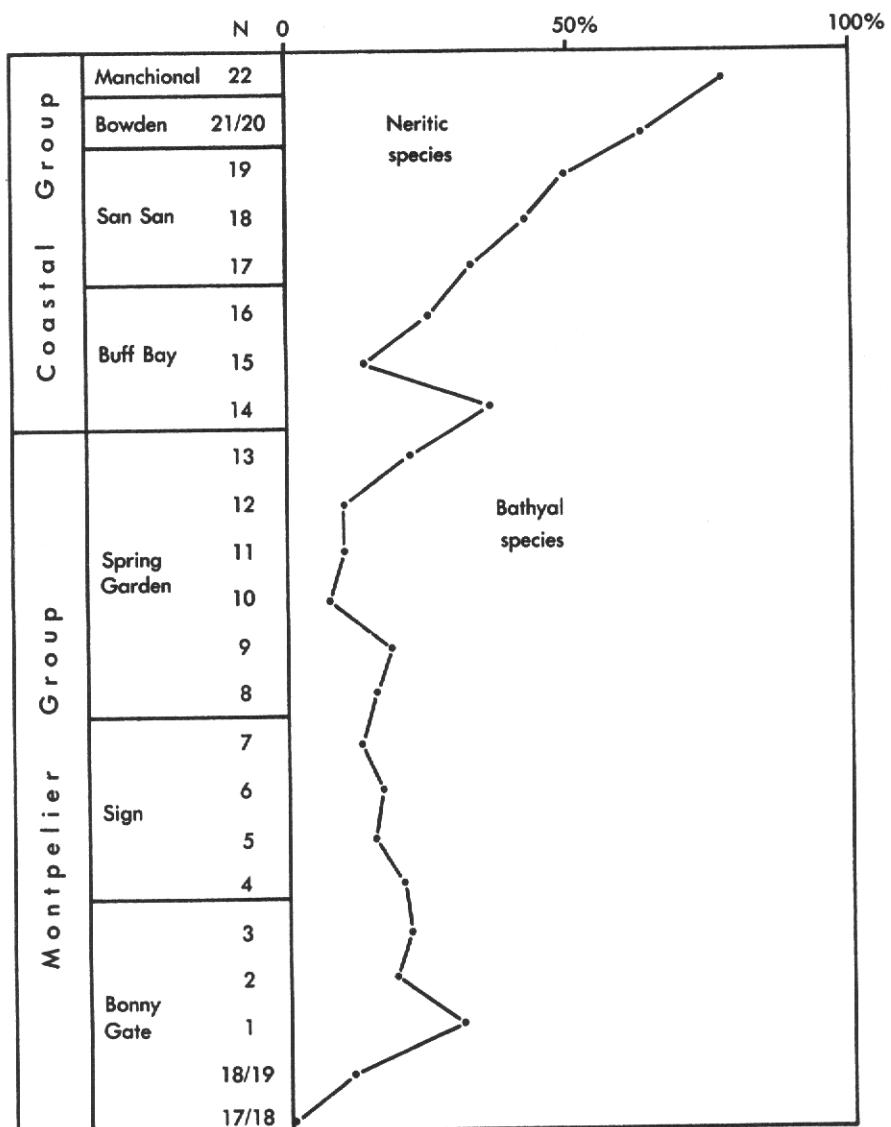


Fig. 1: Percentage of neritic vs. bathyal ostracodes in the Montpelier and Coastal Groups of Jamaica.

Table 1: Distribution of bathyal to outer neritic species of ostracodes in the Montpelier and Coastal Groups of Jamaica.

Murchison	22	Aurila gordoni (Bold) Aurila sp. Bavida condylus Bold Bavida longiseta Brady Bavida sp. Cativella auriv Coryell & Fields Cativella pulleyi Teeter Caudites angulatus Puri Caudites howei Puri Caudites medialis Coryell & Fields Caudites nipeensis Bold Caudites obliquocostatus Bold Caudites rectangularis (Brady) Coquimbia congeneratostata (Bold) Costa elliptipes Levinson Costa cubana Bold Costa dolini Bold Costa maquayensis (Bold) Costa pseudohini Bold Costa robinsoni Bold Costa variabilcostata laticostata Bold Cushmanoides sp. Cytherella spp. Cytherellidae sp. Cytherella dominicana (Bold) Cytheroperon (Cytheroperon) bichense Bold Cytheroperon (C) sp. aff. C. (C) bichense Bold Cytheroperon (C) sp. aff. C. hamatum Sars Cytheroperon (Lobocytheroperon) palton Bold Cytherura creseira Bold Cytherura sp. Gangamocytheridea plicata Bold Glyptobairdia corona (Brady) Heinia sp. aff. H. howei Bold Heinia sp. 1 Hemicytherura cranekeyensis Puri Hemicytherura pulicapsis Poag Hermanites hornbrooki (Puri) Hermanites hutchisoni (Bold) Hermanites ischoppi (Bold) Jugoscytherea pannosa (Brady) Jugoscytherea ricksgurgenensis (Howe & Low) Kongarina depressa Bold Kongarina quellita Coryell & Fields "Kongarina" sp. aff. "K." abyssicola (Müller) Loxocancha (Loxocancha) durhami Butler Loxocancha (Loxocancha) forda Bold Loxocancha (L.) sp. aff. L. (L.) forda Bold Loxocancha (Loxocancha) levii Brady Loxocancha (Loxocancha) spinolata Bold Loxocancha (Loxocancha) sp. Loxocancha (Loxocancha) antennae Bold Loxocancha (Loxocorniculum) dentatocorniculum (Brady) Loxocancha (Loxocorniculum) fisheri (Brady) Loxocancha (Loxocorniculum) lenemkai Bold Loxocancha (Tococancha) apidicola Hartmann Macrocypris sp. Microstestiferis sp. Neocaudites maceratus (Stephenson) Neocaudites tripilistratus (Edwards) Occulocythereis angusta Bold Orionina butlerae Bold Orionina serulata (Brady) Orionina vaughani (Ulrich & Bassler) Paracorypis sp. Paracytheridea calcitrapa Bold Paracytheridea sp. aff. P. hispida Bold Paracytheridea ischoppi Bold Paracytheridea sp. Paronesidea sp. aff. P. attenuata (Brady) Paronesidea elegansissima (Bold) Phacorhabdotus sp. aff. P. varians (Bornemann) Pakaryella poagi Bold Procythereis californensis (Smith) Procythereis deformis (Reuss) Procythereis sp. Propontocypris varaderoensis Lubimova & Sanchez Pseudocythereis sp. Pterygocythereis micenica Bold Pterygocythereis sp. Puriano ex gr. convoluta Teeter Puriano galapagensis (Coryell & Fields) Puriano mesocostalis (Edwards) Puriano minuta Bold Quadracythere antillae (Bold) Quadracythere howei (Puri) Quadracythere producta (Brady) Quadracythere sparsa Bold Quadracythere sp. Radimella confragosa (Edwards) Radimella ovata Bold Radimella wantlandi (Teeter) Triobelina howei (Stephenson) Triobelina sp. Uroleberis angulata (Brady) Uroleberis triangula Bold Uroleberis sp. Xestoleberis' sp. aff. X. antillae Bold Xestoleberis sp. 1 Bold Xestoleberis sp.		Rochette, west bank
Borden	21/20			
San San	18			
Buff Bay	16			
	15			
	14			
	13			
	12			
	11			
	10			
	9			
	8	X X		
	7			
	6			
	5			
	4			
	3			
	2			
	1			
	19/18			
	18/17			

Table 2: Distribution of neritic species of ostracodes in the Montpelier and Coastal Groups of Jamaica.