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Taxonomy and paleobiogeography of some Late Cretaceous desmoceratine ammonoids from the northwest Pacific province

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Taxonomy of the Late Cretaceous desmoceratine ammonoid genus "*Damesites*" and allied taxa is revised and updated based on newly collected population samples from the Yezo Group, Hokkaido, Japan, together with their type specimens. Previously known seven species and subspecies of "*Damesites*" from the upper Turonian to lower Campanian in the northwest Pacific province are reassigned to one revised species of *Damesites* and two species of *Paradamesites* gen. nov. based on clear differences in developmental patterns of ribs and growth lines. The genus *Damesites* should be strictly applied to the north Pacific Realm's species like *Damesites damesi* . On the other hand, the long-established species "*Ammonites sugata*" (= "*Damesites sugata* "), ranging from the middle Turonian to Santonian in the African- Indian, European, northwest and northeast Pacific provinces, is re-assigned here to a new genus *Paradamesites* forming new combination *Paradamesites sugata*. Late Turonian "*Damesites ainuanus*" and Coniacian "*Damesites* sp." from the Yezo Group are junior synonyms of *P. sugata*. *Paradamesites rectus* gen. et sp. nov., previously called "*Damesites sugata*" from the Santonian–Campanian strata of the Yezo Group is a descendant of *P. sugata*. The revised species of *Damesites* and species of *Paradamesites* gen. nov. co-occur sympatrically in the Late Cretaceous of north Pacific Realm. Both the revised *Damesites* and its ancestral genus *Tragodesmoceroides* originated in the north Pacific Realm, and most species during the Turonian–Campanian were endemic to the north Pacific Realm. *Paradamesites*, in contrast, originated in the African-Indian province and became widespread. *Paradamesites sugata* appears to have migrated from the African-Indian province to the north Pacific Realm during the latest Turonian–Coniacian and subsequently dispersed as a cosmopolitan species. Similar evolutionary patterns are also recognized in some other ammonoid families (e.g., Gaudryceratidae, Tetragonitidae, Desmoceratidae, and Kossmaticeratidae) during the Late Cretaceous of the northwest Pacific province.

Key words: *Damesites, Paradamesites* , migration, worldwide distribution, Yezo Group, Cretaceous.

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