coast of South America, also off Marion Island in the South Indian Ocean, in the Arafura Sea, and near Japan.

It appears to me difficult to believe that these are not merely variations of one and the same species, and that if they were compelled to reside under similar local conditions, the unimportant specific distinctions would be bridged by many intermediate forms.

Although separated widely in space the conditions under which these species exist may in some respects approximate to each other. Thus the temperature at which they have severally been recorded to live off Japan and the western coast of South America do not differ widely, being 41°·1 in the former and 35°·5 in the latter. Although *Nematocarcinus altus* was taken at a still greater depth off the north-west coast of the island of Celebes, and near to land, at a depth of 2150 fathoms, with a temperature of 38°·9, that is at a temperature that is more commonly recorded at the depth of 600 fathoms.

If we compare the specific characters of one group with those of the other, we shall find but little difference beyond the number of teeth on the rostrum. Closer examination with others will show that these teeth are generally smaller and more crowded in the first and less so in the second where the rostral process is longer.

All these distinctions are but slight in relation to the physical conditions which appear to lead to the true features of specific character.

No specimen of this genus has so far as we know been found fossil.

The fresh-water genus *Atya* is very remarkable, both for its peculiarity of form and for the distant localities in which it has been found.

The American naturalist Randal described a small specimen which was taken in the rivers or ponds of the island of Hawaii, under the name of *Atyoida*, and another species, but very closely resembling it, was taken by the late Dr. Stimpson in the island of Tahiti, whence numerous specimens were brought home in the Challenger collection. A third has been taken in the rivers of Mexico by Saussure, and, lastly, from the river Potimerim in South America.

The older known species that have longer been associated with the genus are eight in number, and are found in localities here tabulated:—

Atya armata, ...	New Zealand.
„ *margaritacea*, ...	New Caledonia.
„ *occidentalis*, ...	Mexico and West Indies.
„ *pipilles*, ...	New Zealand.
„ *robusta*, ...	New Caledonia.
„ *scabra*, ...	Mexico and West Indies.
„ *spinipes*, ...	New Zealand.
„ *sulcatipes*, ...	Cape Verde Islands

Associated with *Atya sulcatipes* was a specimen of *Atya* (*Atyoida*) *serrata*, and a