

crabs in the extreme north shows a number of anomalies. Many of the shelf species extend from North Cape southwards but the intertidal crabs on the east coast do not extend equally to the far north. Habitats for sheltered-water and mud-flat crabs are available in the harbours of Awanui, Hohoura and Parengarenga, though there are few suitable habitats available for exposed rocky shore species between Cape Kari Kari and the North Cape block. It cannot really be supposed, however, that absence of the right ecological niche is the limiting factor. Some of the mud flat crabs, *Helice*, *Hemigrapsus crenulatus* or *Hemiplax* may in future be collected in some part of the very extensive Parengarenga Harbour, but sample collections have not as yet brought them to light.

From the Bay of Islands northwards there is a steady falling off in both the presence and abundance of intertidal crab species. *Heterozius* has not, as yet, been recorded further north than the Bay of Islands, which also seems the most northerly locality recorded for *Hemiplax*. At least in recent years, the otherwise common and conspicuous intertidal *Hemigrapsus edwardsi* has not been observed commonly north of the Bay of Islands; a single specimen has been collected from Hohoura Harbour but in this locality and at Whangaroa Harbour and Doubtless Bay, its niches are filled by *Cyclograpsus lavauxi* and small specimens of *Leptograpsus variegatus*. In New Zealand, as elsewhere, *Leptograpsus* is a common crab of open, surf-washed rocky coasts, where it shelters in deep crevices or under large boulders. In the harbours of the far north, especially Hohoura and Parengarenga, young specimens are abundant in sheltered habitats under stones or gravelly areas and even on firm mud flats, from about half tide mark upwards. This is just the habitat in which *Hemigrapsus edwardsi* is common further south. Such a very definite filling of a different niche by another species indicates that the lack of *Hemigrapsus edwardsi* in the far north is real, rather than the product of inadequate collecting. On the west coast suitable habitats for *H. edwardsi* are lacking in the far north but at Opononi, on the Hokianga Harbour it is again abundant in its usual niche.

The apparent lack of some of the typical New Zealand intertidal crabs in suitable habitats in the far north is difficult to account for if indeed it is not due to collecting failure. If the distribution pattern sketched here has any reality it shows that species fall off towards the north, as they do towards the south. It is quite certain that many niches in the far north are not filled by crabs.

	<i>Eurynolambrus</i>	<i>Ozius</i>	<i>Leptograpsus</i>	<i>Hemigrapsus crenulatus</i>	<i>Hemigrapsus edwardsi</i>	<i>Helice</i>	<i>Hemiplax</i>	<i>Cyclograpsus insularum</i>	<i>Cyclograpsus lavauxi</i>
North Cape	x	x						x	
Parengarenga	x	x	x						
Hohoura	x	x	x	x	rare	x			x
Awanui							x		
Doubtless Bay	x	x	x						x
Whangaroa	x	x	x						x
Bay of Islands	x	x		x	x	x	x		x

SOUTHERN ISLANDS

The Southern Islands of New Zealand, especially Campbell Island, approach the southern limit for Brachyura in the South Pacific and South Indian Oceans. Only the hymenosomid, *Haliscarcinus planatus* is found further south at Kerguelen and