It is probable that the *Chiton piceus* of Angas is this species. He informs us that "this very common species is freely distributed on most parts of the coast of New South Wales. Dwelling in cavities on the upper surfaces of the rocks exposed to the full action of the waves, the valves are generally more or less worn and destitute of character. Length, 2½ inches."

The two foregoing species have a close external resemblance with each other and with *Acanthopleura picea* (Gmel.), auct. (non Reeve). As a matter of fact, the former has frequently been described as *Acanthopleura picea* in spite of its apparently discontinuous distribution in the West Indies and in the Indian Ocean. To Mr E. A. Smith of the British Museum belongs the credit of pointing out characters on the under surface of the valves which serve to distinguish these three species from each other.

These species can be separated on a careful comparison of the sculpture of the shell, but unfortunately the shells are almost invariably so corroded that the surface markings are obliterated. The differences in the character of the girdle are too slight to be of much value; the light and dark bands of the latter are too variable to be of any use.

The following analyses refer to two out of many specimens in my own collection of *Acanthopleura granulata* (Gmel.), from Barbadoes, in future referred to as A. and B., and to a specimen (C.) of *Acanthopleura* sp. (?) (= *Acanthopleura picea*, Gmel.) from the West Indies, probably from St Thomas, for which I am indebted to my friend Mr W. H. Dall. Also to the Challenger specimen of *Acanthopleura spiniger* from Cape York, and to three specimens of *Acanthopleura incana*. The first two, A. and B., are from Japan, the last (C.) from Port Jackson. Specimen A. was given me by Mr Dall, B. and C. were collected by the Challenger.

Unfortunately the Challenger Expedition did not obtain any specimens of this genus from the West Indies, but as the West and East Indian forms have been confused with one another, I have not hesitated to deal with them all at considerable length.

Table of Measurements in mm. of the Upper Surface (Tegmentum only) of the Isolated Valves.

	Acanthopleura granulata.				*Acanthopleura* sp. (?)		*Acanthopleura spiniger.*		*Acanthopleura incana.*					
	A.		B.		C.				A.		B.		C.	
Valves.	Length.	Brdth.	Length.	Brdth.	Length.	Brdth.	Length.	Brdth.	Length.	Brdth.	Length.	Brdth.	Length.	Brdth.
1	12	19	9	16	10	20	13·5	19	9	15·5	5	10	4	8
2	14	22·5	11	19	12	23	16	23	10·5	18·5	6	12	5·5	9
3	11	25·5	9	21	9	26	12	26	7	20	5	12·5	3	10
4	13	27·5	10·5	23	10	27·5	13·5	28	10	22	5	13	4	11
5	13	28	10	24	10·5	28	13	28	10·5	23	6	13·5	4·5	11·5
6	13·5	26·5	11	23	11	26·5	12	27	9·5	22	6	13	3·5	11
7	11	23	8·5	20·5	8·5	23	11	24	8	20	5	12·5	3·5	10
8	8	17	7·5	16	10	19	10	20	6	15·5	4·5	10	3·5	8
Total size of body	61	37	55	31	65	40	85	42	60	40	28	20	21	15