

by Bell,¹ who described the two allied species *Antedon decipiens* and *Antedon irregularis*, the former with spiny cirri and no palmars, and the latter with palmars but unarmed cirri. But their other characters, especially the short arm-joints and the lateral projections on the lower pinnules, agree very closely with those of *Antedon crenulata*. Bell appears to have regarded the absence of palmars in *Antedon decipiens* and of cirrus-spines in *Antedon irregularis*, which has palmars, however, as sufficient to separate both these types from *Antedon crenulata*. They had been dredged by H.M.S. "Alert" on the north-east coast of Australia; and when in August last I began to revise the tridistichate species of *Antedon* in the Challenger collection, the descriptions of which had been written five or six years before, I found that a form closely allied to *Antedon decipiens* and an example of Bell's *Antedon irregularis*, but without palmars, had been figured on Pl. XLVIII. figs. 3-5 and Pl. XLIX. figs. 1, 2 respectively. Both alike had been obtained in Prince of Wales Channel, and had formerly seemed to me, as the "Alert" specimens from the same locality did to Bell, to represent two different specific types which could not be referred either to *Antedon variipinna* or to *Antedon crenulata*. A third form from the Arrou Islands also appeared to be new, and I figured it under the name of *Antedon dubia* (Pl. XXXVI. figs. 1-6), not being quite clear in my own mind as to whether its tridistichate condition is the normal one or merely due to regeneration of a ten-armed form, as is so often the case in *Antedon rosacea* and other species.

Lately, however, I have made a critical study of all the "Alert" material, and have also reconsidered my descriptions of *Antedon variipinna* and *Antedon crenulata*. The result is that I find myself unable to discover any characters which are sufficiently constant to be of specific value as distinguishing *Antedon irregularis* and *Antedon dubia* from *Antedon decipiens*, or any of these three from *Antedon variipinna* and *Antedon crenulata*. Bell² had himself remarked after describing *Antedon irregularis*—"This species has some resemblance to *Antedon decipiens*; but it may be distinguished from it by (α) the absence of spines from the joints of the cirri, (β) the broader lower pinnules, and (γ) the greater length of the more distal pinnules." He gave no details, however, respecting the relative sizes of the lower and distal pinnules respectively in the two types, and after examining his material I find a difficulty in attributing the difference to anything more than the size of the individual specimens, those of *Antedon decipiens* being generally smaller than those of *Antedon irregularis*. The presence of spines on the cirrus-joints of *Antedon decipiens*, and their absence on the more numerous joints of the cirri in *Antedon irregularis*, seemed, however, to be good specific characters. But when I came to examine the grey specimens from Prince of Wales Channel, which Bell had provisionally regarded as a variety of the white individuals obtained at the same locality, on account of their cirri being "rather more numerous and more jointed," I found

¹ "Alert" Report, pp. 159-162.

² "Alert" Report, p. 162.