

not avoid recognising units for which no names were available, and he himself described at least 50 species, without, it may be said, always leaving reference specimens to show how the names should be applied. He realised that "there are undoubtedly many distinct races of plants one meets with in the field, all called by the same name, an absurd proceeding! If we make all these races which differ in trivial characters into species, all idea of relationship is lost . . . but by using a trinomial nomenclature great progress can be made, and names of plants will be more or less intelligible, which is far from the case at present" (letter to F. G. Gibbs, 1 March 1915).

He proposed to grow many forms of *Acaena* as he saw in a series of spined, half-spined and spineless bidibidis something that "looks precious like a case of Mendelian crossing, as seen in bearded and beardless wheats". The experimental programme was beyond his resources and even now, just fifty years later, we are still only guessing at the relationship between these forms, though some work has been done on other species of *Acaena* (Dawson, 1960).

Hybridism as an explanation for so-called "intermediate forms" had been suggested by Cockayne as early as 1899, in relation to the well-marked differences in the juvenile forms of *Sophora* (1899: 373), and from then on the idea was never very far from his mind. Characteristically he recorded the occasion of his re-awakened interest in hybrids (1925: v): "It was in April, 1921, that I had the good fortune while sauntering one evening in the beautiful forest near Elfin Bay, Lake Wakatipu, to accidentally find . . . a most diverse assemblage of sapling and seedling southern beeches (*Nothofagus*) . . . the great majority matching no known species. This at once suggested hybridisation. . . . This case of hybridity led me into examining in the light of many years' experience the whole matter of wild hybrids in the New Zealand flora and I published a preliminary account of the subject in 1923." In 1926 he wrote to Gibbs: "At any rate New Zealand is showing far better than any other region that wild hybrids occur in vast swarms . . . a matter even yet doubted by many herbarium botanists". Had he lived longer he would have seen wild hybrids taken for granted, and the principle of introgression widely accepted.

With the help of a grant from the Royal Society of London and three months field work by H. H. Allan (1927-28), many examples of wild hybrids accumulated, and Cockayne's last paper, a joint one with Dr Allan (1934), lists 491 hybrid groups, some well authenticated, some admittedly not proven.

The names of Cockayne and Allan will always be associated in relation to hybrids. They probably met about 1918 (they were together at Cass in August of that year) and between the voluble, excitable older man and the quietly thoughtful younger one there developed a warm friendship based on mutual admiration. This association led directly to Dr Allan's relinquishing his teaching career, and indirectly took him into the Department of Scientific and Industrial Research within which the present Botany Division owes much to Cockayne's inspiration.

APPLIED ECOLOGY

The national importance of the sand drift problem was first emphasised in Cockayne's reports, and one result of his recommendations was the experimental stabilisation of sand on the Wellington west coast, as a preparation for afforestation (Hocking, 1964: 133). Many thousands of acres of artificially fixed sand dunes now carry forest and the development of their soils is being carefully studied. The assured return that must accrue from more knowledge of the soil was something Cockayne insisted upon time after time.