

INTRODUCTION

Botanical keys have long been used for identifying and checking plant specimens. They are valuable aids to the botanist, the agricultural officer and the farmer. Vegetative keys are of particular importance since they enable plants to be identified during the greater part of their life. In the West Indies this vegetative recognition of grasses is becoming more important as there is a growing appreciation of the value of grazed pastures. Trinidad in particular is rapidly developing its pastoral resources but there is no key to the grasses of the island.

The orthodox dichotomous keys which have been developed for other areas and other groups of plants are effective but they are laborious to use and much time is lost tracking down and comparing the minute differences in plant structure. In this paper a clip-card system has been adopted in an attempt to obtain the same revolutionary advantages which this system has had in statistics, accounting and other fields. Many of these advantages have been achieved though the key is not claimed to be infallible and could be further improved. It may, however, be used with reasonable certainty provided the method of coding is understood and that specimens examined are average examples of the species.

When work was commenced on this project it was hoped that accurate ink drawings from fresh specimens, in flower, could be produced for most grass species occurring in Trinidad. These would be supplemented by botanical descriptions of their vegetative characters and all the relevant data coded and clipped on individual cards for each grass. Hitchcock (6) lists no less than 180 species of grass known to occur in Trinidad, besides the numerous introductions which have been made in the search for better grasses. With the limited time available this large number had to be narrowed down by some arbitrary criteria. It was decided to exclude most hygrophelous and shade loving species together with those species occurring only very rarely. The tediousness of the drawings and
or making them?

the difficulty of obtaining fresh specimens in flower further limited the work but by examining specimens in the herbarium and studying descriptions by other workers, the more important grasses have been covered. It is hoped that in future years cards for all the grasses of Trinidad can be clipped and more drawings and descriptions added, thus completing this work.

As the basis of his classification on a limited number of existing grasses, he used the presence or absence of auricles, numerous ligule and collar characters, the shape size and hairyness of leaf blades and sheaths, the venation of the blades and sheaths and the root stock characters.

Bow (2), Hitchcock (6) and Chippindall (5) followed by giving broad descriptions of vegetative characters of grasses but Hubbard (7) first used these really effectively in developing a key to the grasses of the British Isles. He made no new or revolutionary advances in grass identification but simply developed the observed differences in structure into a practical botanical key. Having little more than 100 grasses to differentiate, the variable factors at his disposal enabled him to keep his key fairly concise but, it should be remembered that such vegetative keys soon become unwieldy and confused if large numbers of grasses are involved.

Allen (1), also working on a limited number of grasses developed a vegetative key to the grasses of Barbados. This work was based essentially on Hubbard's earlier work but he adapted it for use with the local tropical grasses. Since many of these grasses of Barbados also occur in Trinidad this key has been most useful and if it is considered while visiting these characters used in distinguishing the various species.

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| 1. Young shoot in bud | (a) Rolled |
| | (b) Folded |
| 2. Plants | (c) Tufted or not conspicuously creeping |