polysaccharides in the cell wall of seeds—the gums and hemicelluloses—the function of which may be either storage or structural or both. Preliminary experiments aimed at determining the function are described but it is clear that much more needs to be done. The final chapter is devoted to that most remarkable and bizarre of all plants—*Welwitschia*—a gymnosperm of a sort but an organism that is almost impossible to classify. It is phylogenetically of an ancient lineage and still somehow survives—although threatened by plant hunters—in a natural habitat with considerable drought stress in the Southern Namib desert. Although it has some CAM characteristics, it does not appear to be a functional CAM plant and CO_2 is taken up during the day, via open stomata. Thus, it suffers tremendous water loss and yet survives in a rainless desert while many other plants die; clearly, a miraculous plant and one worthy of conservation and further physiological investigation!

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Disease Resistance in Plants: by J. E. VANDERPLANK. 2nd edn. Academic Press, Orlando, 1984. 194 pp. $34.50.

Anyone expecting a conventional discussion of modern research on disease resistance mechanisms in plants will be sadly disappointed by this book; the author, for example, dismisses phytoalexin endeavours in one sentence as due to 'much barking up the wrong tree'. He also discusses at some length the sink-induced loss of resistance in certain field crops, which is based on the curious concept to a biochemist that high sugar content in the leaves is a requirement for disease resistance in such plants. There is also much here about Vanderplank's favourite terms—horizontal and vertical resistance—and he discusses again his theory relating protein polymorphism to vertical resistance. Among a variety of pathological situations, the potato–*Phytophthora* and the cereal rust interactions tend to predominate in illustrating these various ideas.

Vanderplank's saving grace is that he combines a grasp of plant pathology with one of plant breeding and is deeply concerned to advance our understanding of the resistance-susceptibility duality of higher plants. He has a highly individual, incisive style which I enjoyed and I am sure biochemists working on disease resistance mechanisms will benefit from this text, in spite of its idiosyncratic non-biochemical approach.

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Plantes Médicinales: Therapeutique, Toxicité: by CHRISTIANE VIGNEAU. Masson, Paris, 1985. 300 pp. F 350.

There is currently a revival of interest in medicinal plants in many countries and a number of similar publications to this have appeared in English. This paperback is presumably intended for the French medical profession and interested laymen. Four aspects are covered: plant identification, the active principles, the therapeutic efficacy and finally the possible toxic effects. Identification is aided by a number of colour plates, together with line drawings but there are no keys. Vernacular French and Latin names are both given.

Much is taken for granted in relating active principles to beneficial effects. The fact that various flavonoids have been isolated from *Potentilla erecta*, for example, and that the plant extract is reputedly anti-inflammatory does not necessarily mean that this activity is due to the flavonoids that have been characterized. Arnica, also listed under the anti-inflammatory heading, is recorded as containing the unlikely active principles of carotene and manganese! The work is well referenced and thoroughly indexed. It comprises a useful dictionary of medicinal plants, but the reader needs to remember that the beneficial effects ascribed to many of these plant extracts remain to be established by proper clinical investigation and modern phytochemical analysis.

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