- 2. Rabesa, Z. A., Voirin, B., Favre-Bonvin, J. et Lebreton, Ph. (1978) *Phytochemistry* 17, 1810.
- 3. Rabesa, Z. A. et Voirin, B. (1978) Tetrahedron Letters 39, 3717
- 4. Audier, H. (1966) Bull. Soc. Chim. Fr. 2892.
- 5. Mackenzie, A. M. (1969) Phytochemistry 8, 1813.
- 6. Hasan, A. (1976) These Doct. 3ème cycle, Lyon.
- 7. Ray, A. B., Dutta, S. C. et Dasgupta, S. (1976) *Phytochemistry* **15**, 1797.
- 8. Goudard, M., Favre-Bonvin, J., Lebreton, Ph. et Chopin, J. (1978) *Phytochemistry* 17, 145.
- 9. Iyengar, M. A., Bhat, U. C., Katti, S. B., Wagner, H., Seligmann, O. et Herz, W. (1976) *Indian J. Chem.* 14B, 714.

Phytochemistry, 1979, Vol. 18, p. 362. Pergamon Press Ltd. Printed in England.

0031-9422/79 0201-0362 \$02.00/0

5-DEOXYFLAVONES FROM THE VOCHYSIACEAE

J. L. C. LOPES*, J. N. C. LOPES† and H. F. LEITAO FILHO*

*Fac. Filosofia C. Letras, USP, and NPPN, 14100, Ribeirao Preto. Brazil; †Fac. Farm. Odontologia and NPPN, 14100, Ribeirao Preto, Brazil; †Dep. Morf. e Sistematica Vegatais, UNICAMP, 13100, Campinas. Brazil

(Received 24 August 1978)

Key Word Index—Qualea parviflora; Q. grandiflora; Salvertia convallariodora; Vochysia tucanorum; V. cinnamomea; Vochysiaceae; 5-deoxyflavones; chemotaxonomy.

There have been no previous flavonoid surveys of the family Vochysiaceae. However, Correa et al. [1] did report the presence of ellagic acid in the wood of five South American genera. We now report the results of our investigation of the leaf flavonoids of five Brazilian species of Vochysiaceae. 7,3',4'-Trihydroxyflavone, 3'-methoxy-7,4'-dihydroxyflavone (geraldone) and their corresponding 7-glucosides were found in Salvertia convallariodora St.-Hil. In leaves of Vochysia cinnamomea Pohl both aglycones were identified, but in V. tucanorum Mart, only 7,3',4'-trihydroxyflavone was found. In two other members of the Vochysiaceae: Qualea parviflora Mart. and Q. grandiflora Mart. no flavonoids could be detected. These two 5-deoxyflavones have been identified previously in the Leguminosae: both in Trifolium subterraneum L. [2], only 7.3'.4'-trihydroxyflavone in T. repens [3] and Baptisia spp. [4]. Their presence in the Vochysiaceae may suggest some link between the two families, although 5-deoxyflavonoids as a class are known in a number of other angiosperm families.

EXPERIMENTAL

The Vochysia and Qualea species were collected in Canastra Ridge, near Araxa, Minas Gerais, while S. convallariodora was collected at the base of the ridge, in December 1977. Dried leaf material was extracted in 70% MeOH and the conc. extracts first examined by 2D-PC in BAW, HOAc 15%, BAW/HOAc 50%. BAW/CAW. The flavonoids were isolated by PPC (Whatman 3MM) with BAW and then HOAc 50%. Identification was confirmed by co-PC with authentic markers in five solvents (BAW, Forestal, CAW, HOAc 50%, PhOH) and spectral properties in the UV/visible region [2].

Acknowledgements—We are grateful to Prof. J. B. Harborne for laboratory facilities at the University of Reading. Financial support was provided in part by FAPESP (Quim. 77/0708) and CNPa.

REFERENCES

- Correa, D. B., Birchal, E., Aguilar, J. E. V. and Gottlieb, O. R. (1975) Phytochemistry 14, 1138.
- Wong, E. and Francis, C. M. (1968) Phytochemistry 7, 2123.
 Livingston, A. L. and Bickoff, E. M. (1964) J. Pharm. Sci. 53
- Markham, K. R., Mabry, T. J. and Swift, W. T., Jr. (1970) *Phytochemistry* 9, 2359.