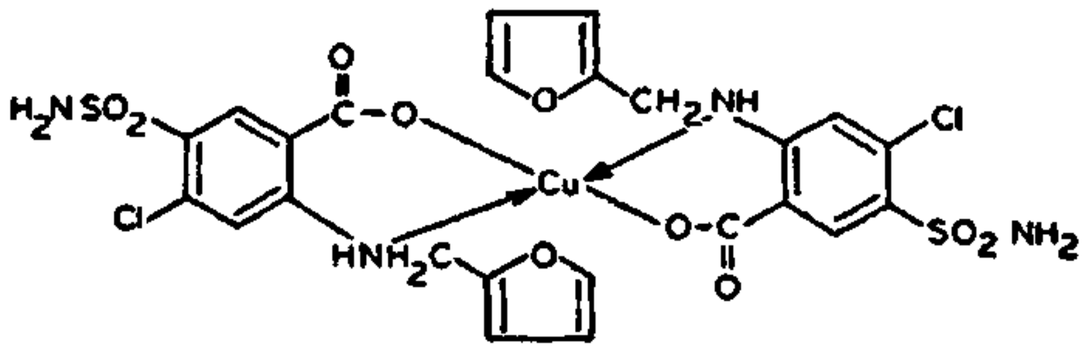

Figure 1. Proposed structure of Furosemide–copper complex.

The library facilities provided by the Director, Defence Research Development Establishment, Gwalior, are gratefully acknowledged. Thanks are also due to M/s Hoechst India Ltd, Bombay, for the gift of Furosemide.

1 July 1988; Revised 7 September 1988

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NATURE OF THE APICAL CAP IN *TRENTEPOHLIA*

G. N. HARIHARAN and
K. V. KRISHNAMURTHY
Department of Botany, Bharathidasan University, Tiruchirapalli 620 024, India.

THE green alga *Trentepohlia* (order *Chaetophorales*) is not only a free-living member growing on tree barks and rocks, but also enters into symbiotic association with fungi to form lichens such as *Coenogonium*[1]. The alga is characterized by branched filamentous thallus and the terminal cell of each branch has special and prominent apical caps.

The apical cap was described as pectic in nature as early as 1911 by West and Hood[2]. This has been taken for granted by all subsequent investigators and the standard textbooks[1,3] of even recent date have described the cap as pectic, citing West and Hood[2].

In a recent study of the lichen *Coenogonium* where the phycobiont is *Trentepohlia*, the present authors found that the caps were very prominent and scored negative in standard histochemical reactions that are specific for pectin, such as toluidine blue O at pH 4.5[4] and alkaline hydroxylamine hydrochloride[4]. The cap was also negative to ruthenium red[5]. It was, however, positively stained by zinc-chlor-iodide[4] which stains cellulose blue. This reaction and the absence of staining with toluidine blue O were also noticed in the characteristic stratified walls of ordinary vegetative cells of this alga. In other words, the apical cap of this alga is of the same chemical nature as the stratified wall of vegetative cells, i.e. cellulosic.

The authors thank the Department of Environment and Forests, New Delhi, for financial assistance.

1 July 1988; Revised 19 September 1988

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