

# OIL-BODIES IN SOUTH INDIAN LIVERWORTS\*

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## ABSTRACT

The structure of oil-bodies in 14 foliose liverworts collected from Nilgiri Hills, South India, has been described. The plants from this area have been investigated for the first time in Indian bryology for their oil-bodies. The results are significant in the taxonomy of Jungermanniales.

## INTRODUCTION

In India, in recent years, oil-bodies have been investigated in liverworts growing in Eastern Himalayas (UDAR *et al.*, 1970), Palni Hills (Kodaikanal), South India (UDAR & NATH, 1971) and Western Himalayas (UDAR & NATH, 1976). The present paper deals with the oil-bodies in 14 leafy liverworts collected from Nilgiri Hills, South India. The oil-bodies vary in shape, size, structure and often in colour as well as in number in various taxa, and they are significant taxonomically. They are conspicuously present in Calobryales, Jungermanniales and majority of Metzgeriales, and almost absent in Marchantiales and Anthocerotales.

The plants were collected from different localities of Nilgiri, Hills South India by one of the authors (RAM UDAR) in the month of January, 1972. The investigations were made on fresh living plants and the specimens have been deposited in the Hepatic Herbarium, Department of Botany, Lucknow University, Lucknow (India).

## DESCRIPTION

### 1. **Radula complanata** (L.) Dum. (Text-fig. 1)

Oil-bodies usually one, rarely two per leaf cell almost filling the cell, lumen, ovoid to oblong, 8.14-10.17  $\mu\text{m}$  long and 8.14-6.1  $\mu\text{m}$  wide, faintly granular with irregular outline.

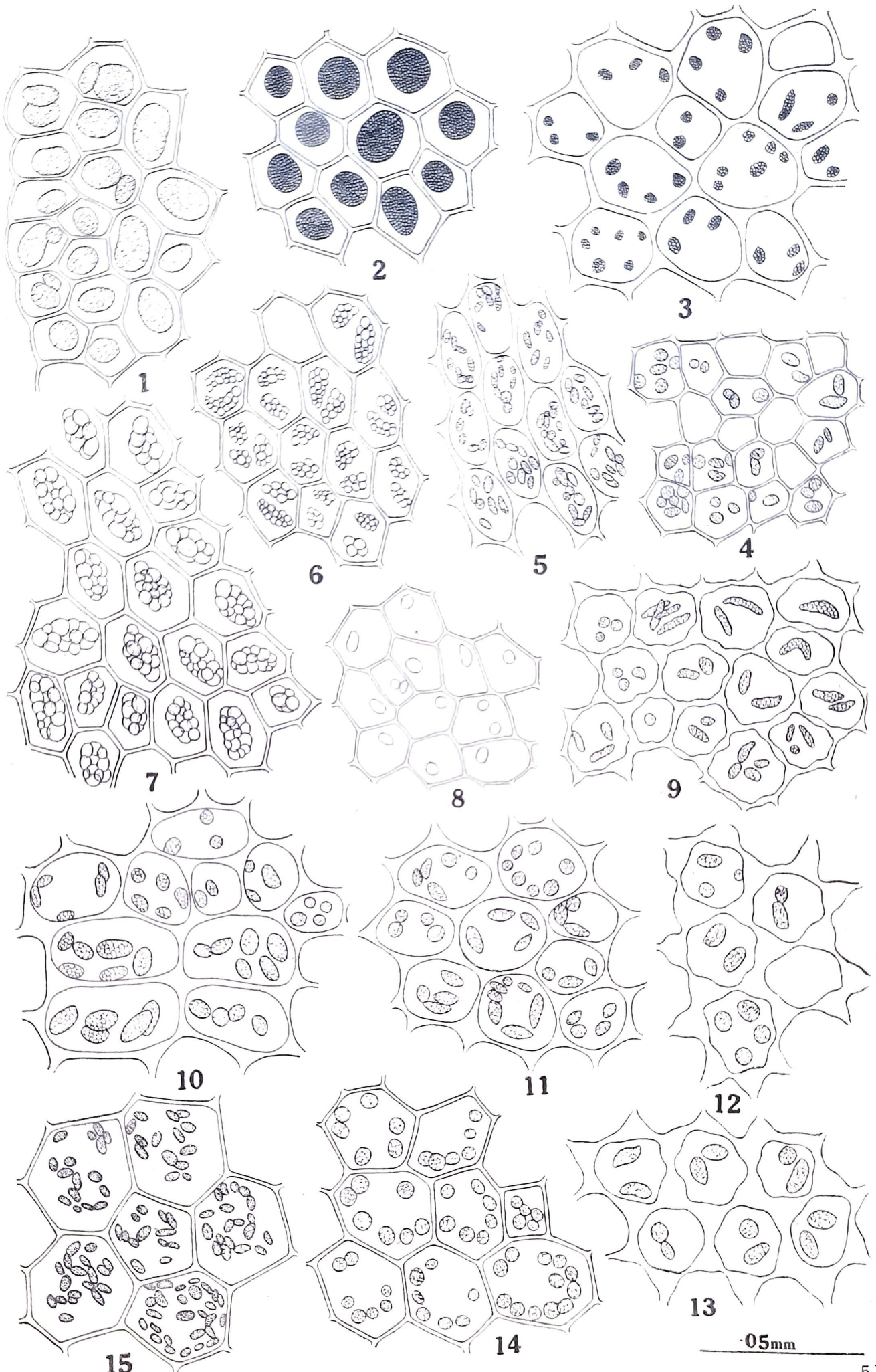
*Specimen examined*—No. 81S/A. Coll. R. Udar *Locality* : On way to Avalanche, South India, January 2, 1972.

### 2. **Radula tenerimma** St. (Text-fig. 2)

Oil-bodies only one in each cell of the leaf in middle, at the base, and at the margin, occupying most of the area of the cell, globose to sub-globose, 6.1-12.2  $\mu\text{m}$  in diameter with prominent granules.

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Text-figs. 1-15: 1. *Radula complanata* (L.) Dum., 2. *Radula tenerimma* St., 3. *Lophocolea minor* Nees, 4. *Lophocolea muricata* Nees, 5. *Tuzibeanthus chinensis* Mizutani comb. nov., 6. *Cheilolejeunea rigida* St., 7. *Cheilolejeunea indica* St., 8. *Microlejeunea ulcina* (Tayl.) Spr., 9. *Lejeunea perrottettii* St., 10. *Bazzania tridens* Nees, 11. *Galypogeia trichomanis* (L.) Gorda, 12-13. *Jamesoniella microphylla* (Nees) Schiffn., 14. *Plagiochila ghatiensis* St., 15. *Porella perrottetiana* (Mont.) Hatt.



*Specimen examined*—No. 123S/F. Coll. R. Udar. *Locality* : Naduvattam, South India, January 2, 1972.

10. **Bazzania tridens** Nees (Text-fig. 10)

Oil-bodies 2-6 per leaf cell, oval to elliptical, 2.03-8.14  $\mu\text{m}$  long and 2.00-4.07  $\mu\text{m}$  wide, granuloid.

*Specimen examined*—No. 120S/A. Coll. R. Udar. *Locality* : Avalanche, South India, January 2, 1972.

11. **Calypogeia trichomanis** (L.) Corda (Text-fig. 11)

Oil-bodies vary from 2-7 in each cell of the leaf, spindle-shaped, 4.07-10.17  $\mu\text{m}$  long and 4.07  $\mu\text{m}$  wide, granuloid.

*Specimen examined*—No. 57S/E. Coll. R. Udar. *Locality* : On way to Avalanche, South India, January 2, 1972.

12. **Jamesoniella microphylla** (Nees) Schiffn. (Text-fig. 12, 13)

Oil-bodies usually 2-3 rarely 4 per leaf cell, oval, 6.1-8.14  $\mu\text{m}$  long and 3.0-4.07  $\mu\text{m}$  wide, granuloid.

*Specimen examined*—No. 55S. Coll. R. Udar. *Locality* : Avalanche, South India, January 2, 1972.

13. **Plagiochila ghatiensis** St. (Text-fig. 14)

Oil-bodies vary from 5-12 in each leaf cell, spherical, 4.07-6.1  $\mu\text{m}$  in diameter, granuloid.

*Specimen examined*—No. 64S/C. Coll. R. Udar. *Locality* : On way to Avalanche, South India, January 2, 1972.

14. **Porella perrottetiana** (Mont.) Hatt. (Text-fig. 15)

Oil-bodies numerous per leaf cell, oval to elliptical, 4.07-6.1  $\mu\text{m}$  long and 2.07-4.07  $\mu\text{m}$  wide, minutely granular.

*Specimen examined*—No. 64S/B. Coll. R. Udar. *Locality* : On way to Avalanche, South India, January 2, 1972.

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