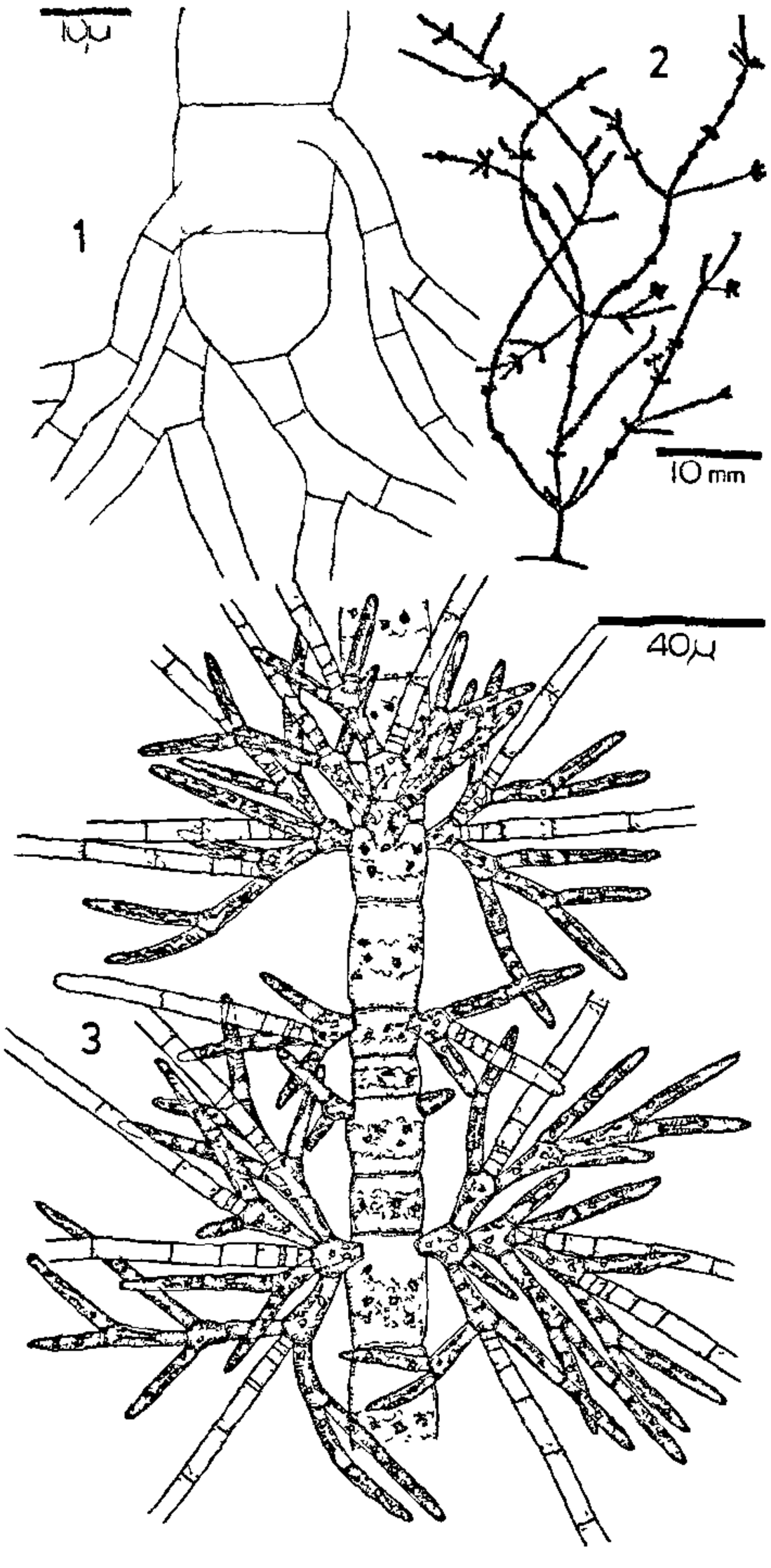

Figures 1–3. *Draparnaldia champlainensis* Cook. **1.** Showing Rhizodal part. **2.** Habit of the alga. **3.** Main axis having short laterals.

The present alga is similar to the type description in the shape of the cells of the main axis and short laterals and in the girdle shaped chloroplast with several pyrenoids. The number, position and the trichothallic growth of the hair are also the features showing resemblance with *D. champlainensis* Cook.

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SOME SAPROLEGNIACEOUS FUNGI PARASITIZING *MACROBRACHIUM LAMARREI* H.M. EDW. AND THEIR EGGS

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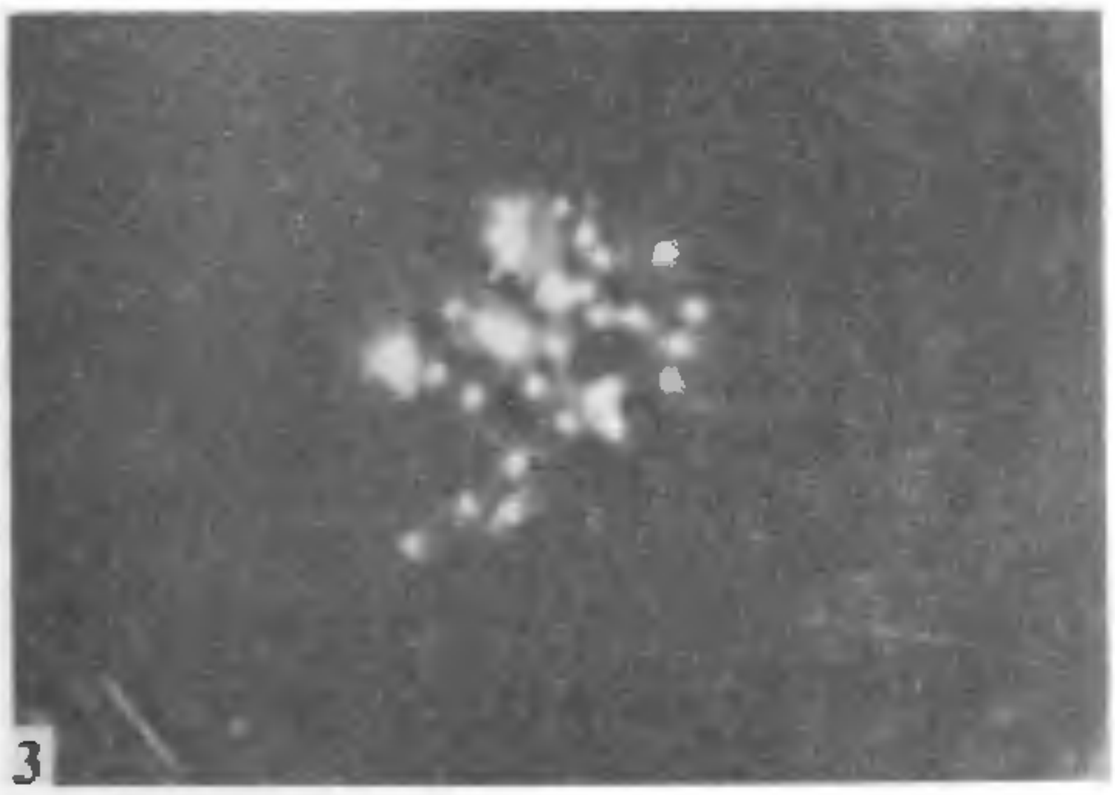
WHILE surveying the pathogenic fungi associated with freshwater prawn and their eggs, some diseased specimens of *Macrobrachium lamarrei* H.M. Edw. carrying infected eggs (figure 1) were collected from river Rapti, Gorakhpur district in August 1982. Detailed microscopic observations in the laboratory revealed that about 80% of the eggs, clasped within the appendages, were covered with fungal mycelia and the abdominal region of the prawns also showed mycelial threads coming out (figure 2). Cottony outgrowths were clearly visible on the surface of the infected eggs (figure 3). The infected eggs were opaque and whitish in appearance while the healthy eggs were transparent and light green in colour.

Fungi involved in the infection were isolated on boiled hempseed halves in sterile distilled water. Their unifungal, bacteria-free cultures were prepared on the lines described earlier[1–3]. The isolates were identified



Figures 1–3. *Macrobrachium lamarrei* H.M. Edw. **1.** with infected eggs clasped within the appendages, **2.** showing fungal tuft growing out of its abdominal region, **3.** showing cottony fungal outgrowths.

as *Achlya orion* Coker and Couch, *Achlya flagellata* Coker, *Aphanomyces laevis* de Bary and *Aphanomyces helicoides* Minden with the keys[3,4] and the host species was identified by using the key given by Rajyalakshmi[5].

In order to establish the pathogenicity of the isolates obtained, controlled infection was studied by standard methods described by Scott and O'Warren[6] in triplicate at 25–28°C using healthy eggs and adult individuals of *M. lamarrei*. Injuries were inflicted to adult individuals by removing small pieces of terga from their abdomen.

The fungal hyphae growing out from the injured areas of the prawn were observed within 36–49 hr of placing the prawns in the infection troughs. These infected prawns died within 43–55 hr of the infection test. The specimens kept in troughs in which no inoculum was added, remained unaffected and survived (table 1). Similarly, the experiment conducted with healthy eggs of prawn revealed that within 24 hr of the start of the experiment, the fungal mycelia could be seen protruding from the surface of 79–90% of the eggs (table 2). Fungi growing on the experimentally infected prawns and their eggs were isolated and were compared with the cultures of the original inoculum. It was found identical with the original fungi.

Prabhuji *et al*[7] have reported natural occurrence of *A. orion* and *A. helicoides* on the eggs of *Palaemon lamarrei*, which has now been named as *M. lamarrei*. Besides this, there is no report in the available literature on the mycopathology of prawn and their eggs. The present communication is, thus, the first report about the occurrence of *A. orion* Coker and Couch, *A. flagellata* Coker, *A. laevis* de Bary and *A. helicoides* Minden as natural pathogen on the body of the adult and *A. laevis* and *A. flagellata* on the eggs of *M. lamarrei* H.M. Edw.

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Table 1 *Controlled infection studies to establish the pathogenicity of the different isolates of fungi on the adult individuals of Macrobrachium lamarrei H.M. Edw.*

Name of the Fungus inoculated	Period for Mycosis to occur (hr)	Period for death to occur (hr)
Achlya orion Coker and Couch	42–45	47–53
Achlya flagellata Coker	37–40	43–49
Aphanomyces helicoides Minden	36–38	45–48
Aphanomyces laevis de Bary	45–49	50–55
Control	—	—

Number of prawn individuals studied—3; Mycosis evident and number of prawns dead—3.

Table 2 *Controlled inoculation studies to establish the pathogenicity of the different isolates of fungi on the eggs of Macrobrachium lamarrei H.M. Edw.*

Name of the Fungus inoculated	Number of eggs used	Number of eggs infected
Achlya orion Coker and Couch	1. 100	80
	2. 100	85
	3. 100	87
Achlya flagellata Coker	1. 100	80
	2. 100	86
	3. 100	90
Aphanomyces helicoides Minden	1. 100	82
	2. 100	90
	3. 100	87
Aphanomyces laevis de Bary	1. 100	79
	2. 100	82
	3. 100	88
Control	1. 100	—
	2. 100	—
	3. 100	—

Mycosis evident within 24 hr.

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OBERONIA THWAITESII HK. F., AN ADDITION TO THE ORCHID FLORA OF INDIA

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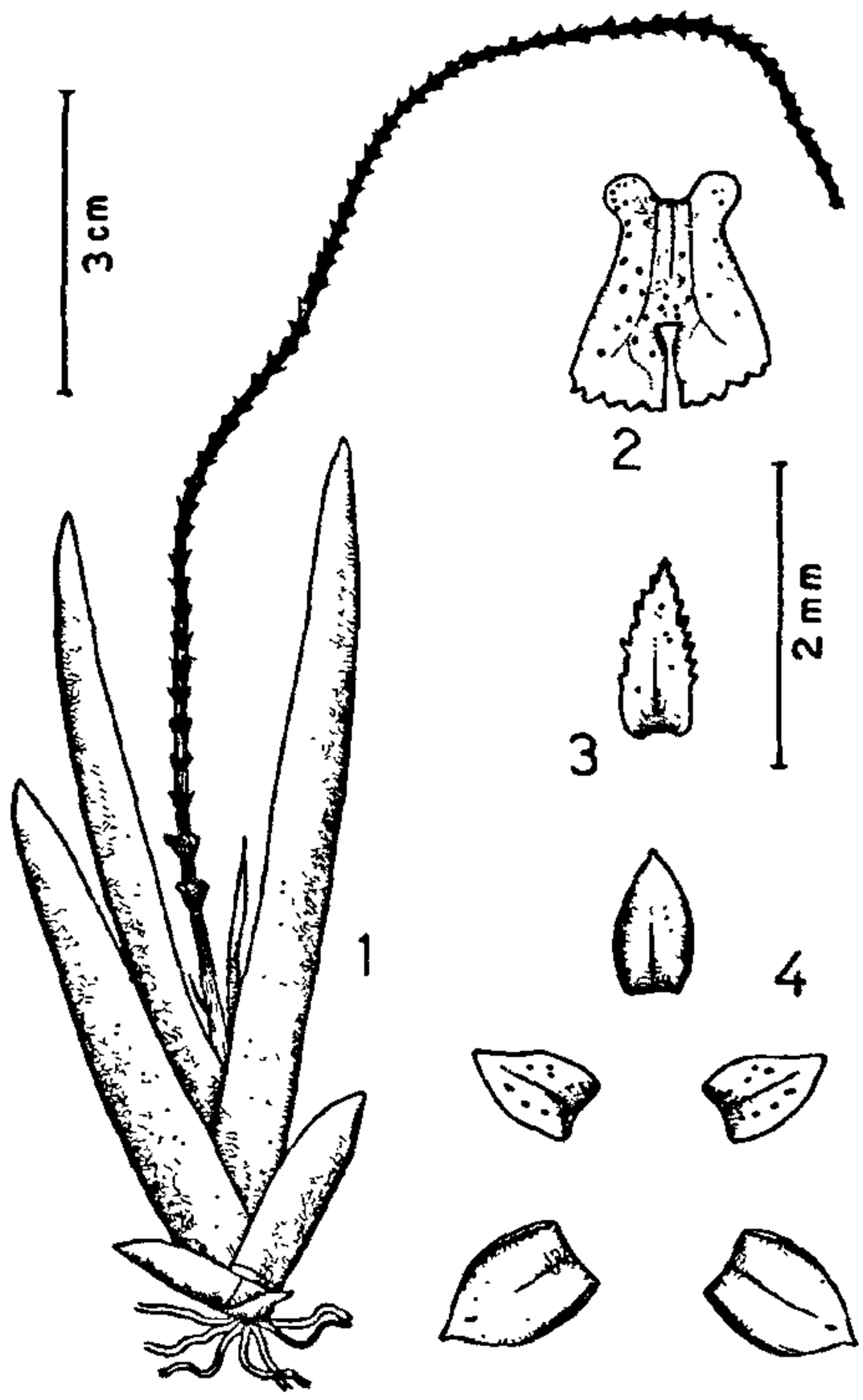
THE genus *Oberonia* Lindl. is represented in South India by about 20 species. While having several endemic and characteristic orchid elements of its own, this region possesses many other species which are of wider occurrence and sometimes a few elements of the flora of the adjacent countries also[1-3]. The occurrence of South African, Sri Lankan and South East Asian elements in the flora of South India is of considerable phytogeographical interest[4,5]. A species of *Oberonia* was collected in 1977 from Thenmalai, Quilon district,



Figures 1–4. *Oberonia thwaitesii*. **1.** Habit, **2.** Lip, **3.** Floral bract and **4.** Sepals and petals.