

TABLE 3

Substrate specificity of *Arthrobacter* sp. B062 for hydrocarbons

Substrates	Dry biomass (g/litre)	Substrates	Dry biomass (g/litre)
<i>n</i> -Decane	0.7	<i>n</i> -Hexadecane	2.61
<i>n</i> -Undecane	1.45	<i>n</i> -Octadecane	2.62
<i>n</i> -Dodecane	1.52	Kerosene	2.58
<i>n</i> -Tridecane	1.78	Diesel	2.55
<i>n</i> -Tetradecane	2.45	Straight run gas oil	1.05

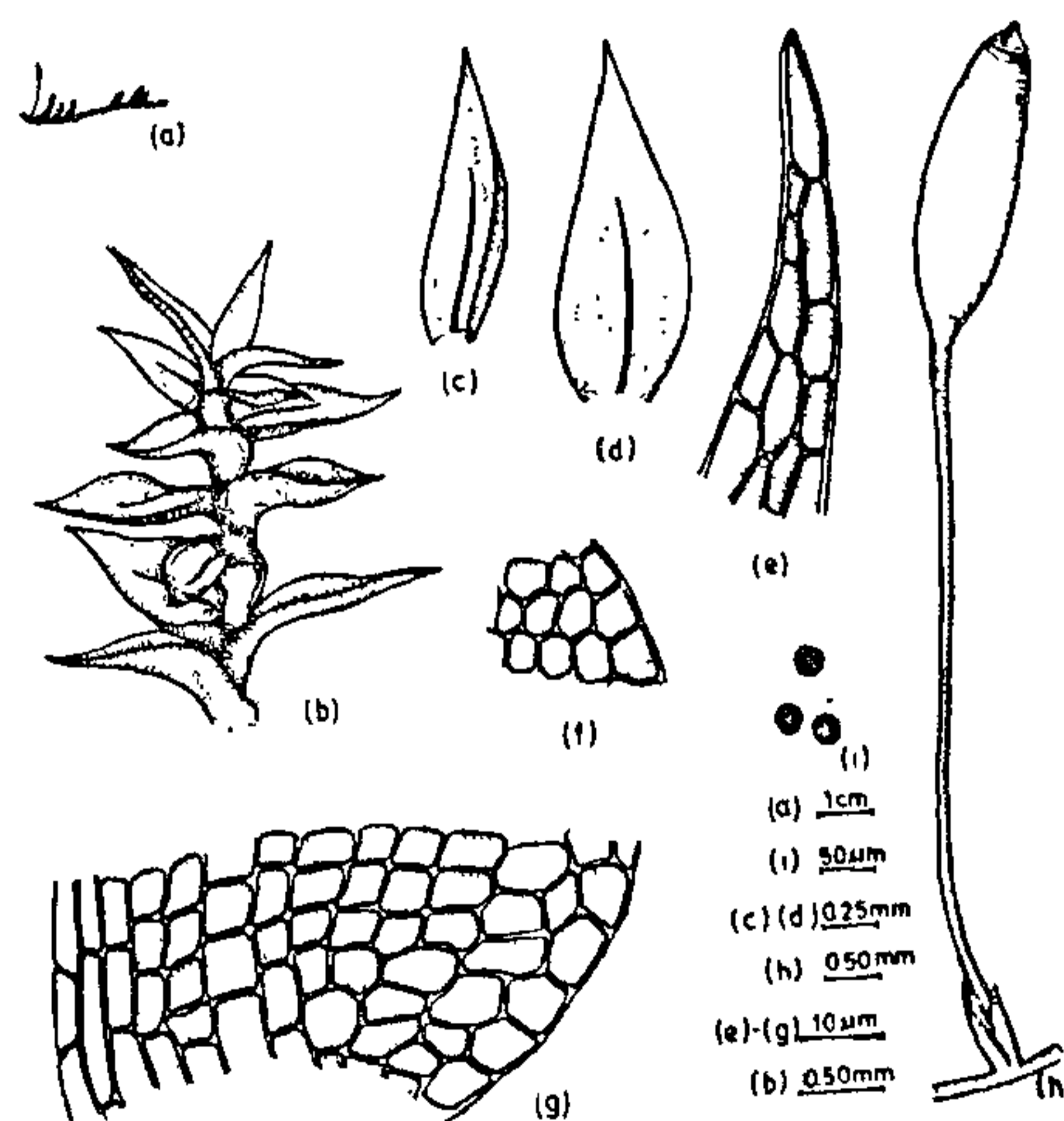
The abilities of strains of the genus *Arthrobacter* to utilize petroleum hydrocarbons is well known<sup>6,7</sup>. However, reports on the strains of the genera *Aeromonas* and *Serratia* to utilize petroleum hydrocarbons are scanty in literature, particularly, the utilization of petroleum hydrocarbons as sole source of carbon and energy by the strain of the genus *Aeromonas* was not previously known.

13 April 1982

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(Leskeaceae) was collected from a temperate, evergreen, coniferous forest near Manali (c. 2000 m alt.). Subsequently, the species was identified as *R. declinatus* (Hook.) Brid. It is the first record of this species from North-western Himalaya. The morphological features are given below:

The light green plants grow in loose tufts. The main stem is creeping and gives rise to erect branches (figure 1a). The latter are less than 1.5 cm tall. Leaves are dense, imbricate, appressed to the stem in dry condition but erectopatent when moist (figure 1b). These are slightly concave (figure 1c), ovateapiculate (figure 1d),  $\pm 1.5$  mm long and  $\pm 0.6$  mm wide with entire margin. The costa is single and covers more than half the length. Leaf cells are incrassate and variable in shape (figures 1e-g). Seta arises from lateral perichaetial buds (figure 1h). It is  $\pm 0.9$  cm long and is rough, especially below the capsule. Capsule is erect, ovate-cylindrical,  $\pm 2.25$  mm long and  $\pm 0.95$  mm in diameter. Peristome is double and is deeply inserted. Endostome is much larger than exostome. Spores are brown, round, coarsely papillose with average diameter 26  $\mu$ m (figure 1i).



Figures 1a-i. *Regmatodon declinatus* (Hook.) Brid. (a) Dry plant; (b) Portion of a wet plant; (c,d) Lateral and surface view of leaf; (e) Leaf apex; (f,g) Cells from middle margin, and base; (h) Portion of gametophyte with sporophyte; (i) Spores.

**REGMATODON DECLINATUS (HOOK.) BRID.—A NEW RECORD FOR THE NORTH-WESTERN HIMALAYA, INDIA**

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DURING a plant collection trip to Himachal Pradesh, India, in October 1981, one species of *Regmatodon*

The genus *Regmatodon* with 14 valid species forms a tropical belt round the globe. As per published records this taxon is represented in India by four

species: *R. orthostegius* Mont. from Western Himalaya; *R. declinatus* and *R. orthostegius* from Eastern Himalaya; *R. orthostegius*, *R. laevis* (Thwait et Mitt.) Par. and *R. serrulatus* (Doz. et Molk) Bosch et Lac. from South and West India. All these species show a narrow range of distribution (Gangulee<sup>1</sup>). *R. declinatus* differs from its closely allied species *R. orthostegius* in having rough seta.

In India *R. declinatus*, an India-Burma-China-Taiwan species, is so far known only from Eastern Himalaya. The climate is much more moist in this region as compared to the Western Himalaya, owing to gradual lessening westward of precipitation. Therefore, the record of *R. declinatus* from Western Himalaya extends its range of distribution.

The authors are thankful to Dr. Alan Eddy for determination of the moss.

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### SAUROMATUM GUTTATUM (SCHOTT.) A FLY CATCHER AND SAMPLER AROID

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*SAUROMATUM guttatum* (Schott.) is a common aroid occurring in hedges of crop fields and gardens in villages, adjacent to the forests in Central India.

The species exhibits sapromyophilous pollination syndrome<sup>1</sup>. The flowers are night blooming and emit an odour of decaying dung, deceitfully attracting a large number of flies, beetles and ants in the morning. The insects enter the spathe by crawling over the downwardly directed silky papilla and fall inside. In each flower 8 to 160 individuals of minute and large-sized insects are isolated. Such trapped flies remain inside the blossom for ca 24 hr. Odour emission then ceases and the male flowers release pollen, dusting the trapped insects. After a while the papilla on the spathe shrink and the pollen laden insects are freed to escape. These observations agree with those relating to *Arum* and *Arisarum*<sup>1,2</sup>.

TABLE 1

*Census of Insect Species trapped in Spathes of Sauromatum guttatum*

Sl. No.	Class	Family	Genus*	No. of Species
1.	Coleoptera	Bruchidae	Caryedon	1
		Scarabaeidae	Sisyphus	1
2.	Diptera	Calliphoridae	Chrysomya	1
			Atherigona	1
			Gymnodia	4
			Musca	3
			Myospila	1
			Ophyra	1
			Orthellia	2
			Sarcophagidae	Sarcophaga
		Sepsidae		Sepsis
		Otitidae	Physiphora	1
3.	Hymenoptera	Formicidae	Acantholepis	1
			Crematogaster	1
			Pheidole	1
		Unidentified so far	18 species	18
			Total	41

\* Identification received from CIE, London.