structures in the spark spectrum have been previously reported by Wood and Kimura[2], but resolution was incomplete such that, for example, only five components were found in a line shown by the present observations to have ten. For this reason the conclusions about the spin drawn from these early data by Murakawa[3] require further examination.

A partial classification of the gross multiplet terms of the iodine spark spectrum has been given by Murakawa (loc. cit.) but even without this the nuclear spin can be deduced. Thus the lines in the accompanying table exhibit regular degraded quintet patterns, arising obviously from terms with $J=2$. (This agrees with the allocations which are taken from Murakawa.) The calculated interval factors for spins of $\frac{5}{2}$, $\frac{7}{2}$, $\frac{9}{2}$ are given. In a line free from perturbations, these should be constant, and it is quite evident that the nuclear spin of iodine is $\frac{5}{2}$. The slight irregularities in the interval factors calculated for the $\frac{5}{2}$ value are due to the small unresolved upper term fine structures.

Intervals in cm.$^{-1}$ × 10^{-3}

Line	Spin 5/2	Spin 7/2	Spin 9/2
λ 5496·8	9 × 47·5	11 × 39	13 × 33
	7 × 47	9 × 36	11 × 30
$6\,^5S_2 - 6\,^5P_1$	5 × 47·5	7 × 33	9 × 26·5
	3 × 50	5 × 30	7 × 21·5
λ 5774·7	9 × 82	11 × 67	13 × 57
	7 × 78·5	9 × 61	11 × 50
$X_2 - 6\,^5P_1$	5 × 79	7 × 58	9 × 44
	3 × 76	5 × 45	7 × 32
λ 5161·2	9 × 44	11 × 36	13 × 30·5
	7 × 42·5	9 × 33	11 × 27
$6\,^5S_2 - 6\,^5P_3$	5 × 42	7 × 30	9 × 23
	3 × 40	5 × 24	7 × 17

Structures have been measured in a large number of arc and spark lines and in some of these perturbations have been found. Full details will be published elsewhere.

S. TOLANSKY.

Physical Laboratory,
University of Manchester.
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[1] *Proc. Roy. Soc.*, A, **136**, 585; 1932.
[2] *Astrophys. J.*, **46**, 181; 1917.
[3] *Sci. Pap. Inst. Phys. Chem. Res. Tokyo*, **20**, 285; 1933.

The Burrow of an Enteropneust

STIASNY described how *Balanoglossus clavigerus* lives in a U-shaped burrow, which is characterised by a regular funnel on the surface at the anterior end of the animal, with the coils of fæces at the posterior end. His illustration has been reproduced in several books. Morgan has also found similar funnels and masses of fæces in the case of another species of *Balanoglossus* and it is probable that all species of this genus inhabit similar burrows. Other species of Enteropneusta, for example, those belonging to the genera *Glossobalanus* and *Ptychodera*, live among the roots of seaweeds, under stones or in the sand in irregularly-shaped tubes of sand-grains, etc., cemented together by slime. It is known that most species of *Saccoglossus* (*Dolichoglossus*) prefer to live in a black muddy soil, but Davis is the only author who has described a special burrow for *Saccoglossus pusillus*, and according to his figure this burrow is irregularly formed.

In 1929, Dr. Mortensen collected near Lourenço Marques a new species of enteropneust, the description of which, under the name *Saccoglossus inhacensis*, will shortly be published by one of my students. When I visited the island Inhaca with a number of students in July 1934, we observed numerous specimens of this animal. It lives on the flats at the eastern side of the island, facing Delagoa Bay. In this area there is a surface layer composed of yellow sand, about 1 cm. in thickness, beneath which is a sandy mud, coloured black by its organic contents. *Saccoglossus inhacensis* inhabits burrows of a typical form, which were easily found by lifting a spadeful of mud and breaking it up, several burrows often occurring in one spadeful. The upper part of the burrow is irregularly coiled and within this part the long proboscis, collar and branchial region of the animal are lodged during low tide. Deeper down, about 4–5 cm. under the surface, the burrow takes the form of a regular spiral, consisting of up to six turns, in which the abdominal region of the animal is located. The direction of the main axis of the spiral is variable; in the majority it was found to be approximately vertical, but it may even be horizontal. Nothing of the burrow or tube was seen in

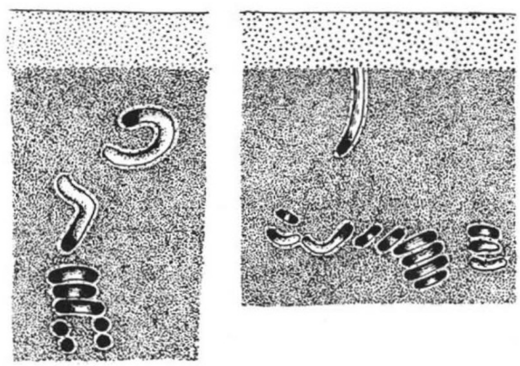

FIG. 1. Burrows of *Saccoglossus inhacensis*. $\frac{3}{4}$ natural size.

the upper layer of clear sand, and no indication of the presence of the animal was found on the surface during low tide. Apparently the animal behaves similarly to *Saccoglossus mereschkowskyi*, which according to Gurjanova and Uschakoff goes deeper down into the mud during low tide. On the other hand, Ritter found that *S. pusillus* protrudes its proboscis above the sand during low tide. It is likely that *S. inhacensis* does not make a permanent tube in the clear sand; it can easily push through this thin layer, when protruding from the burrow during high tide. The burrow itself is undoubtedly of a more permanent nature than is usually the case in Enteropneusta. The spiral part especially is so consistent that it can easily be detached from the surrounding mud.

In the dark mud the burrow is very conspicuous because it is lined by a thin layer of clear sand. This in turn is covered by a layer of slime, giving the inner surface a smooth, shiny appearance. A piece of the mud containing the burrow, such as is illustrated in Fig. 1, was preserved by allowing it to dry up partially, after which small quantities of gum arabic were carefully poured over it.

C. J. VAN DER HORST.

University of the Witwatersrand,
Johannesburg.
Oct. 8.