

*Nudora omercooperi* sp. nov.

MATERIAL STUDIED.

6♂♂ (1 selected as holotype), 3♀♀ (none gravid) from above locality.  
B.M. (N.H.), Reg. Nos. 1963. 495—593.

## MEASUREMENTS AND RATIOS.

	a	b	c	V	Body length. (mm).
Males.	39. 3	8. 8	12. 4		1.18
	42. 3	8. 9	11. 9		1.27
	40. 0	9. 6	12. 1		1.32
	39. 4	10. 2	11. 9		1.34
	44. 5	10. 2	11. 3		1.38
	47. 1	9. 4	12. 6		1.46
Females.	35. 3	9. 0	8. 5	86. 7	1.20
	34. 9	8. 8	12. 2	90. 2	1.22
	39. 9	10. 0	13. 2	89. 6	1.29

Measurements (in mm in body lengths above).

### *MALES*

Body breadth: 0.030; 0.030; 0.033; 0.034; 0.031; 0.031. Head diameter: 0.014; 0.013; 0.013; 0.014; 0.013; 0.016. Length of cephalic setae: 0.013; 0.014; 0.014; 0.013; 0.013. Length of pharyngeal rods: 0.025; 0.028; 0.030; 0.028; 0.029; 0.031. Length of oesophagus: 0.134; 0.142; 0.138; 0.132; 0.135; 0.155. Length of spicules: 0.035; 0.035; 0.040; 0.039; 0.035; 0.035. Length of gubernaculum: 0.044; 0.042; 0.044; 0.047; 0.045; 0.042. Diameter of cloaca: 0.026; 0.022; 0.029; 0.031; 0.031; 0.027; 0.026. Tail length; 0.095; 0.107; 0.109; 0.113; 0.122; 0.116.

### *FEMALES*

Body breadth: 0.034; 0.035; 0.033. Head diameter: 0.014; 0.016; 0.017. Length of cephalic setae: 0.022; 0.016; 0.019. Length of pharyngeal rods: 0.029; 0.026; 0.029. Length of oesophagus: 0.132; 0.139; 0.129. Anal diameter: 0.020; 0.019; 0.020. Length of vulvar flap: 0.039; 0.035; 0.038. Distance of vulva from anterior end of body 1.04; 1.10; 1.14.

### *Cuticle.*

The annules are dense at the anterior end of the body where they overlap and become less dense posteriorly but are never hollow or vacuolate (see INGLIS, 1964). The amphids lie between the first and second annules and there appear to be small anteriorly directed processes of the anterior edge of the second annule flanking them. Four files of spines are present on the anterior end of the body and then a further six files appear about one third the length of the oesophagus posterior to the head. The spines are directed posteriorly on the anterior end of the body until a point slightly posterior to the

posterior end of the oesophagus where they change direction over one annule. From this level posteriorly they are all directed anteriorly. The arrangement of the spines is distorted about the level of the cloacal opening in the males and about that of the vulva in the females (Figs. 6, 7 and 8).

#### Head and Oesophagus.

The mouth opening is surrounded by six setae (the outer circle of labial setae) posterior to which are four long setae of the cephalic circle (Fig. 1). The amphids are circular and supplied by a nerve from the posterior edge. The oesophagus is modified posteriorly as a distinct bulb with a division of its musculature into two parts (Fig. 4), and is modified into a swollen anterior zone in which the muscle fibres run anteriorly to supply the large dorsal and the paired smaller ventrolateral tooth-like structures (Fig. 1). This anterior zone is lined with thick cuticle.

#### *Male.*

The spicules are slim and the gubernaculum is massive, particularly at its distal end. It shows a certain amount of variation (Figs. 2, 3, 5, 7 & 8) but the general form is always the same, with a large median piece projecting between the spicules. There are two zones of modification of the cuticle, on the ventral surface of the body anterior to the cloacal opening, in which the cuticle is thickened and the edges of the annulations project above the general body surface. The more posterior of these is always shorter than the more anterior, about 0.014—0.017 mm and 0.018—0.020 mm long respectively. In the 1.18 mm specimen these supplements lie 0.074 mm and 0.127 mm anterior to the cloacal opening and in the 1.46 mm specimen they lie 0.061 mm and 0.151 mm respectively. In almost all the males the gubernaculum projects through the cloacal opening and the mid-ventral part of the tail immediately posterior to the cloacal opening is markedly depressed (Fig. 8).

#### *Females.*

The reproductive system is single and reflexed. The vulvar opening is near the cloacal opening and is covered by a large cuticular flap which is not marked by cuticular striations (Fig. 6).

### DISCUSSION

This species is clearly referable to the genus *Nudora* and can be distinguished from all the other species referred to that genus by the

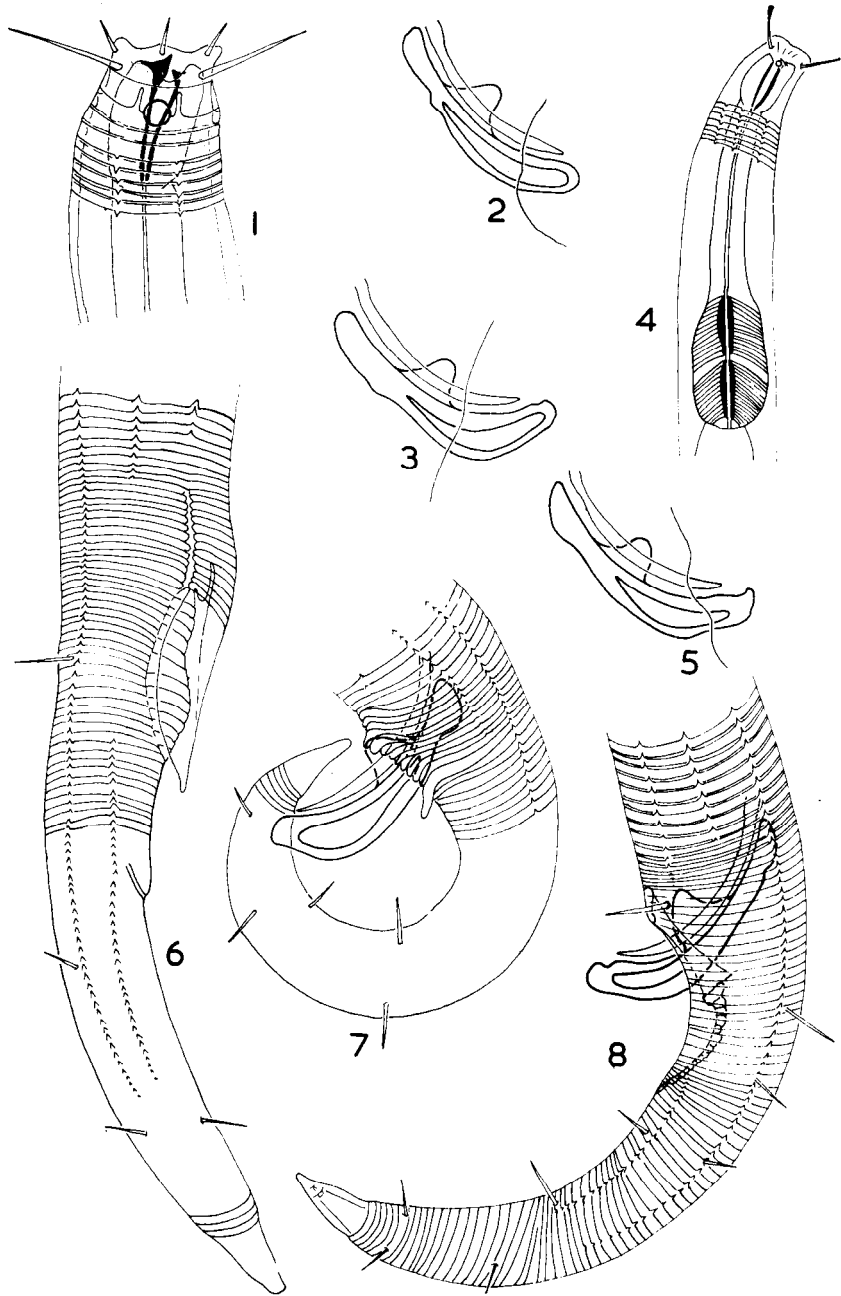
massive form of the gubernaculum, the position of the amphid, the sizes of the anterior annules of the cuticle, the presence of two pre-cloacal zones of modification on the male and the number of files of cuticular spines borne on the body surface (see WIESER, 1954, 1959).

#### SUMMARY

*Nudora omercooperi* sp. nov. is described from a fresh-water spring below high tide mark at Claytons Rocks, South Africa. It is characterized by a massive gubernaculum and the form of various modifications of the cuticle.

#### RÉSUMÉ

*Nudora omercooperi* sp. nov. est une forme plus originale avec des déformations caractéristiques de la cuticule et un gubernaculum très massif.



Figs. 1—8. *Nudora omercooperi* sp. nov. Fig. 1. Lateral view of head with dorsal surface to the left. Figs. 2, 3 & 5. Lateral views of gubernaculum and spicules. Fig. 4. Anterior end of body. Fig. 6. Female tail. Figs. 7 & 8. Lateral views of male tails showing cuticular modification and further variation in shape of gubernaculum.