occurs in this system. The rotten tubers were discarded and the healthy ones removed from the bags and placed in trays.

After 21 days sprouts had become visible and were recorded. Very few eyes were sprouting under treatments R_F 0·2 and 0·7, but almost half were sprouting under treatment R_F 0·6 and nearly three-quarters in the control. R_F 0·2 and 0·6 represent the areas where a neutral inhibitor and gibberellic acid are usually found in this system.

Records were made of total sprout length for each tuber after 29, 33 and 36 days, and total sprout weight for each tuber at 36 days. All indicated a substantial reduction in sprout growth produced by treatments R_F 0·2, 0·5 and 0·7 when compared with the control. Salicylic acid, a mild inhibitor, usually occurs at R_F 0·5 in this system. There were increases in sprout lengths produced by R_F 0·3, 0·4 and 0·6. The mixture of R_F 0·2, 0·4 and 0·7 produced growth intermediate between the extremes given by treatments R_F 0·4 and 0·7, which suggests that the auxin usually found in R_F 0·4 (ref. 6) will relieve the inhibition produced by the compounds at R_F 0·2 and 0·7.

These preliminary results suggest that the inhibitor-β complex does prolong dormancy, the evidence for which until now has been circumstantial. A considerable effect was also produced by treatment R_F 0·2. This is the area of the chromatogram where neutral inhibitors noted by Varga and Ferenczy occur[6]. Although these inhibitors do not disappear at dormancy break[7], this demonstration of what must be presumed to be a dormancy prolonging activity suggests an indirect role in the maintenance of dormancy which has still to be elucidated.

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Vulval Bodies in Certain Species of *Heterodera*

DIFFERENCES in the vulval region of the Tylenchid nematodes of the genus *Heterodera* are of considerable systematic value[1–3]. The "bullae", knob-like structures[4] not present in all species, are of particular importance. They seem to be endocuticular, but their function is unknown. This communication reports the presence in the four species so far examined of other endocuticular bodies closely associated with the vulva itself. My attention was directed to them by Dr C. Ellenby, who first observed them in sectioned material of *H. rostochiensis* and *H. tabacum* (unpublished work).

The "vulval bodies", as it is proposed to call them, are clearly shown in Fig. 1, a longitudinal section of a white cyst of *H. rostochiensis*. They have also been found in *H. schachtii*, a bullate cyst with vulval cone, and in *H. cacti*, an abullate cyst with vulval cone. In both these species the vulval bodies are apparently less well developed than in *H. rostochiensis* and *H. tabacum*. It is too early to say, however, whether the apparent differences in size between the vulval bodies of different species are of systematic value.

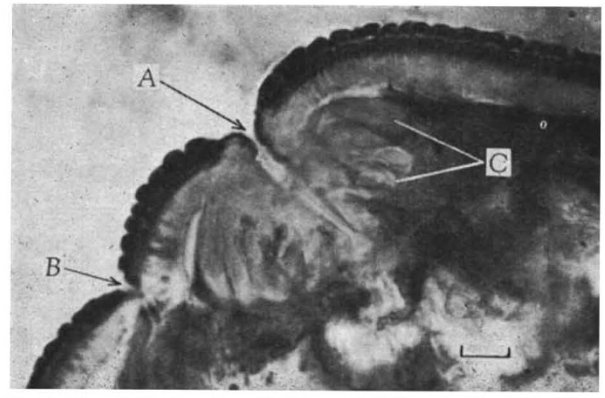

Fig. 1. Longitudinal section of white cyst of *H. rostochiensis* showing vulval bodies. *A*, Vulva; *B*, anus; *C*, vulval bodies. (Scale = 10μ.)

The vulval bodies are embedded in hypodermis, and in all the species examined they are closely associated with the fenestra, the thin peri-vulval region; it would be more correct to say that they are attached to the fenestra, because if this is detached from the cyst wall by manipulation, the vulval bodies are detached with it. Their function is unknown. If detachment of the fenestra of the fully formed cyst is vital for the emergence of larvae[1], then perhaps the vulval bodies may be involved in some way in this process. They do not seem to be involved in mating, for comparison of fertilized and non-fertilized cysts showed that the vulval bodies increased in size after fertilization in the former, but showed no such change in the latter.

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Dry Season Biology of *Anopheles gambiae* Giles in the Sudan

COLLECTIONS of mosquitoes have been made regularly throughout the dry season in the desert west of Omdurman, Sudan, by means of pyrethrum-spraying, well-traps and hand catching. The results indicate that adult female *Anopheles gambiae* (sp. B ?) Giles survive throughout the dry season, but with a change in their physiology and behaviour. The insects were found to hide in dwelling huts (87·7 per cent), in cracks down dry wells (8·5 per cent), in disused or ruined houses (3·2 per cent) and in rabbit and rodent burrows (0·5 per cent). Dissection showed that 77·1 per cent of the nulliparous females captured were engorged with blood. Of these, 90·6 per cent contained human blood. The ovaries evidently undergo only one gonotrophic cycle during the dry season, developing extremely slowly so that, when the rains come, the gravid females are ready to oviposit. These mosquitoes are apparently unable to lay eggs during the dry season.

Laboratory studies have also been carried out on mosquitoes bred in an insectary. About 10 per cent of nulliparous females, kept from the beginning of the cool dry season in conditions of temperature and humidity approximating to natural conditions, lived for periods up to 206 days. Those maintained in similar conditions from the beginning of the hot dry season lived for a maximum of 51 days. Individuals reared towards the