parasites in these cultures had the same form as those in cultures of the exoerythrocytic form.

Details and colour photomicrographs of the infected cells will be presented in the complete publication of this work, which will be sent to *Revista Brasileira de Biologia*.

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Chromosome Number and Behaviour in *Luzula purpurea* Link

IN the course of cytological investigations for the establishment of the chromosome atlas of the endemic flora of Portugal, we found in *Luzula purpurea* Link—a rare annual species only known from Portugal, Madeira and Canary Islands^{1,2}—the diploid number $2n = 6$.

Besides their low number, the chromosomes of this species seem to be provided with two centromeres, one placed at each end of the chromosome. No median, sub-median or sub-terminal constriction could be distinguished either in mitotic or meiotic metaphases.

In anaphase figures both mitotic and meiotic the chromosomes take the shape of a U with their ends turned to the poles and not that of an inverted V as it normally occurs (see accompanying photographs).

This appears to be the first time such chromosome behaviour has been found in plants, and we think it may be related to what Toledo Piza³ reported for the Brazilian scorpion *Tityus bayensis* Perty and for some Hemiptera⁴. Schrader⁵, Hughes-Schrader and Ris⁶, and Ris⁷, working also with Hemiptera, found what they called "diffuse centromeres". This may be also the expression of a common behaviour.

A detailed description of the meiosis of *Luzula purpurea* will soon be published.

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³ Toledo Piza, S., *Scientia Genetica*, 1, 257 (1939).

⁴ Toledo Piza, S., *Anais da Escola Superior de Agricultura "Luís Queiroz"*, 3, 90 (1946).

⁵ Schrader, F., *Cytologia*, 6, 422 (1935).

⁶ Hughes-Schrader, S., and Ris, H., *J. Exp. Zool.*, 87, 429 (1941).

⁷ Ris, H., *J. Exp. Zool.*, 90, 267 (1942).

Mortality of *Aedes aegypti* Feeding on Rabbits Receiving Oral 'Gammexane'

LINDQUIST *et al.*¹ discovered the toxicity to bed bugs of the blood of rabbits fed on D.D.T., and de Meillon² has recently reported the action of 'Gammexane' in regard to mosquitoes. This communication describes a series of tests to elicit the minimum lethal dose of 'Gammexane' in similar circumstances, and the period during which the effect lasts.

The mosquitoes came from an *Aedes aegypti* colony, and were reared and stored in a constant-temperature room of 80°–85° F. in a humidity of 70 per cent. The tests were carried out in the same room; 72-hr. old unfed females were used. The 'Gammexane' was given in the form of a 5.5 per cent solution in rectified spirits, either in a capsule or more conveniently by pipette directly down the throat of the rabbit. Then, at different intervals, the mosquitoes were allowed to feed on the rabbits' ears, and those which fed were collected and stored in cages for 24 hr., when the dead were counted. Unfed specimens were discarded. Prior to the administration of the 'Gammexane', a control group of mosquitoes were fed on the animal, and the mortality was observed after 24 hr.

Two series of tests were conducted, the first to ascertain the minimum lethal dose during the first seven hours and at 24 hr., and the second to observe for how many days the insecticidal effect persisted. The results are shown in Tables 1 and 2 respectively.

TABLE 1. LETHAL ACTION OF 'GAMMEXANE' DURING FIRST 24 HR.

Dose of 'Gammexane'* (mgm. per kgm.)	Control		Hours after administration of 'Gammexane'				
	Number fed	Number alive after 24 hr.	1½	3	5	7	24
40	10	9	2:2	6:6	6:6	4:4	1:1
40	15	15	10:10	14:14	20:20	16:16	6:6
30	14	13	9:9	8:8	5:5	6:6	5:5
25	11	11	8:6	6:6	4:4	3:3	3:3
25	6	6	5:5	9:9	6:6	4:4	3:3
20	7	7	7:5	7:7	9:9	6:6	4:4
15	10	10	10:10	8:7	6:4	8:7	6:6
10	10	10	—	7:0	2:1	4:3	16:9

* 'Gammexane' = γ isomer.

TABLE 2. LETHAL ACTION OF 'GAMMEXANE' DURING WEEK AFTER ADMINISTRATION

Dose of 'Gammexane'* (mgm. per kgm.)	Control		Days after administration of 'Gammexane'					
	Number fed	Number alive after 24 hr.	1	2	3	4	5	6
40	9	9	—	6:6	7:7	8:8	16:3	10:0
30	8	8	10:10	15:15	9:9	8:0	5:0	—
25	12	12	5:5	5:5	13:5	3:0	4:0	—
25	11	11	3:3	4:4	2:2	2:1	—	3:0
15	10	10	6:6	5:5	—	—	—	—

* 'Gammexane' = γ isomer.

The minimum lethal insecticidal dose appeared to be between 25 and 30 mgm. of 'Gammexane' per kgm. of rabbit, though even dosages of 15 mgm. gave a partial mortality. The figures suggest that the concentration of 'Gammexane' in the blood rises for 24 hr.; thus, with the lower dosages, mosquito mortality is incomplete at first, whereas if the insects are fed later in the 24 hr. all may die.