TABLE I

Incidence of sex ratio in A. tuberculata *and* L. himalayanum

Month	*Agama tuberculata*		*Lygosoma himalayanum*	
	1972/73	1973/74	1972/73	1973/74
April	1·14±0·24	0·84±0·21	1·33±0·22	1·25±0·26
May	1·38±0·23	1·09±0·23	1·33±0·23	1·75±0·28
June	1·44±0·22	1·20±0·23	0·86±0·21	1·25±0·28
July	0·93±0·22	1·00±0·24	0·80±0·24	1·38±0·30
August	1·72±0·25	1·60±0·23	1·25±0·24	0·95±0·24
September	1·66±0·25	0·87±0·21	1·29±0·24	0·87±0·24
October	1·25±0·24	1·14±0·25	1·61±0·26	1·60±0·27
November	1·22±0·23	1·30±0·22	1·28±0·26	1·19±0·25
December	1·28±0·23	1·31±0·23	..	..
	AV. SD = ± 0·23	Av. SD = ± 0·22	Av. SD = ± 0·24	Av. SD = ± 0·26

himalayanum, elevation of 2280–2590 m.). Five batches of ten lizards each were taken each month, excluding the months of hibernation, December to April, from 1972 to 1974. The standard deviation (SD) and coefficient of variation (cv) were calculated.

While *A. tuberculata* is a rock loving lizard; *L. himalayanum* dwells in the grassy uplands and alpine meadows, where they are seen from late April to November end, when the first snowfall starts.

The data of sex ratio of the species are presented in Table I. The overall sex ratio of male : female was 1·4:1 (SD ± 0·22) in *A. tuberculata* and 1·19:1 (SD ± 0·25) in *L. himalayanum*, as against an expected sex ratio of 1:1[1,2]. The cause of the deviation from the expected ratio in our catches could not be ascertained nor does such a deviation appear to be uncommon in lizards[4,5].

The present finding, about the outnumbering of the females by males got a further support in having a small coefficient of variation (17·1 and 19·1 in *A. tuberculata* and 19·7 and 21·0 in *L. himalayanum*); thereby showing the consistency, uniformity and stability of the variation.

On the whole the deviation in the sex ratio in *A. tuberculata* seems to be of reverse order when compared to *Calotes numericola*[4], wherein females are reported to be far more numerous than males. Church[5] explains this difference as due to the general alertness and quickness of males in escaping capture, although his own subsequent observation of these lizards from a different area, as also those of Suba Rao *et al.*[4] show that more males are captured than females

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ON THE OCCURRENCE OF LYMPHOCYSTIS IN *ANABAS TESTUDINEUS* (BLOCH)

DURING the course of cage culture experiments of air-breathing fishes in floating nylon net cages installed in a sewage-fed pond situated in Darbhanga township (26·12 N, 85·53 E), a single specimen of *Anabas testudineus* developed peculiar proliferous growths of binding tissue on the fins as well as on the body proper. The most heavily affected part was the tip of the fins, particularly the caudal (Fig. 1). The infected specimen was a male and measured 130 mm in total length and 64 g in total weight. The growth of tissues in the infected portions looked like specks of cauliflower. From the characteristic features, the disease appeared to be Lymphocystis.

Wolf[11] has stated that Lymphocystis is a unique, benign, giant cell disease of world-wide distribution in freshwater and marine teleosts of relatively advanced evolutionary status. Various theories have been presented for Lymphocystis by several workers[1,2,7-9,12]. However, Walker[5] and more recently Walker and Weissenberg[6] demonstrated that these bodies were filled with virus particles when viewed under the electron microscope.

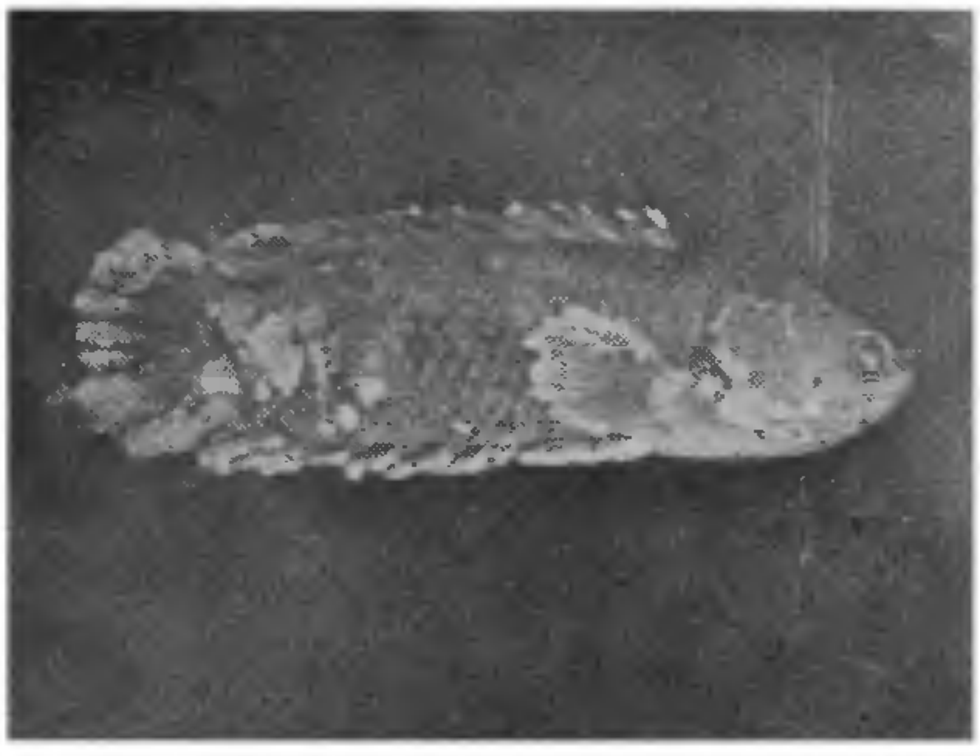

FIG. 1. Lymphocystis growth on the fins and body of *Anabas testudineus*.

There is no earlier report available on the occurrence of this disease in *Anabas testudineus*. Its occurrence has, however, been reported in other species[3,4,7,10]. The disease is known to be highly infectious but there is little information about the mode of its transmission.

The interest and help of Dr. V. G. Jhingran and Dr. P. V. Dehadrai, Central Inland Fisheries Research Institute (ICAR), is gratefully acknowledged.

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STUDIES ON PROTEASE PRODUCTION IN *PENICILLIUM JAVANICUM* VAN BEYMA

Penicillium javanicum Van Beyma P×26 elaborates a proteolytic enzyme. The optimum production of which could be induced with 10 days incubation at 25° C. Presence of glucose in the medium completely inhibits enzyme production.

Although the strain *Penicillium javanicum* displays a variety of biosynthetic activity and produces antibiotics[7], pigments[2], fat[5], etc., no studies have yet been done with regard to the abilities of the organism to elaborate proteolytic enzyme.

To find out a suitable nutritional environment conducive to steady accumulation of the enzyme the strain *P. Javanicum*, P×26 was grown in Czapek–Dox[1] medium where glucose was replaced by 3% wheat bran (WB), 1% wheat flour (WF), 3% rice bran (RB) and 0·1% Bovine Serum Albumin (BSA) separately. Thirty ml of each medium was taken in 100 ml capacity Erlenmeyer flask and was inoculated with conidial suspension having a concentration of $12{\cdot}0 \times 10^6$ (approx.) and incubated at 25° C for 10 days in the case of BSA and 5 days in the case of others, before the respective mycelia were collected. Ten replicates for each medium were considered.

Wheat bran–Czapek–Dox medium (WB–CD) was found to be the most suitable for protease production and was selected for further study. The flasks containing inoculum were kept at different temperatures, 15°, 20°, 25°, 30° and 35° C and the enzyme assay was done on the 5th day. Optimum incubation period of 10 days was determined by observing the accumulation of enzyme on 5th, 10th, 15th, 20th and 25th day at 25° C.

The effect of glucose on the production of enzyme was studied by adding glucose at different concentrations (1, 5, 10, 15 and 20%) to WB-CD medium and noting the result on the 5th and 10th days. The initial pH of the medium was adjusted to 6·5. One flask without glucose was taken as the control.

The enzyme reaction was carried out in 1 ml of 1·5% milk casein in 0·15 M phosphate buffer at pH 7·3 with 1 ml of culture filtrate and 1 ml ethylene—diamine tetraacetic acid (0·458 g EDTA dissolved in 100 ml of water) at 30° C for half an hour. The reaction was stopped by the addition of 1·0 ml of 20% TCA. Precipitate was then removed by filtration. After filtration, 0·6 ml of the filtrate was taken in a tube and 4 ml of protein reagent added to it. After 10