Leander adspersus, \textsuperscript{1} Gelasimus annulipes\textsuperscript{6} and Orconectes viridis\textsuperscript{5} but is at variance with the findings made in \textit{Palaeomon paucidens}\textsuperscript{3} and \textit{Uca pugnator}.\textsuperscript{7} The reason behind this difference in the response to adrenalin treatment is not clearly understood.

Animal Physiology
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ISOLATION OF SALMONELLA TSHIONGWE (6, 8 : e, h : c, n, z 15) FROM A GUINEA-PIG

Salmonellosis is one of the most devastating infections which can occur in guinea-pig colonies. \textit{Salmonella typhimurium} and \textit{Salm. enteritidis} have been incriminated as the common causal organisms of fulminating epidemics in guinea-pigs (Harris, 1962).

Freeman (1948) isolated \textit{Salm. poona} from a guinea-pig in an epizootic infection. Ghosh and Chatterjee (1960) recorded the first natural outbreak of septicemia in guinea-pigs in the country due to \textit{Salm. dublin}. Jayaram et al. (1964) described an outbreak of salmonellosis in guinea-pigs due to \textit{Salm. welti-vedren}. Other \textit{Salmonella} serotypes which have been reported from guinea-pigs in India are \textit{Salm. anatum}, \textit{Salm. enteritidis}, \textit{Salm. typhimurium}, \textit{Salm. derby} and \textit{Salm. worthington} (Khera, 1968).

This note records the isolation of \textit{Salm. tshiongwe} from a dead guinea-pig which on necropsy examination revealed lesions suggestive of septicemia. The isolation of this serotype has been reported earlier from meat animals and food stuffs (Kelterborn, 1967).

The organism was isolated by direct culture from the heart-blood on MacConkey's lactose agar. The isolate was identified as \textit{Salmonella} biochemically and for serological typing the culture was sent to the National Salmonella and Escherichia Centre, Kasauni.

The organism was motile and formed colonies which were semi-translucent, smooth, circular with entire edge and low convex. It did not hydrolyse urea and was M.R. positive. Indole and Voges-Proskauger tests were negative. Glucose, mannitol, sorbitol, maltose, trehalose and dulcitol were fermented. It did not ferment inositol, adonitol, salicin, lactose and sucrose. L-lysine HCl, L-ornithine HCl and L-arginine HCl were decarboxylated. Hydrogen sulphide was produced on triple sugar iron agar. It gave a positive nitrate test and was positive for Simmons's citrate.

This organism was found pathogenic to Swiss mice. Inoculation of 0.5 ml of 24 hours broth culture into mice intraperitoneally killed them within 24-30 hours. \textit{In vitro} antibiotic sensitivity test was carried out using Difco, Bacto-sensitivity discs of medium concentration. The organism was found sensitive to polymyxin B, streptomycin, chloramycetin, neomycin and dihydrostreptomycin.

The authors are thankful to the Director, Central Research Institute, Kasauni, for serological typing of the isolate.

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Haryana Agricultural Univ., Hisar, May 14, 1970.
Letters to the Editor

A NOTE ON LICHENS FROM KASHMIR, INDIA

Lichen collections from the Kashmir valley in the vicinities of Srinagar (alt. ca. 5,500 ft.), Gulmarg to Khilanmarg (7,000-9,000 ft.), Pahalgam (6,000 ft.) and Sonamarg (9,000-11,000 ft.) made by the excursion party from the Department of Botany, Lucknow University in 1968, have been examined. The collections at each of the above localities are not exhaustive, but apparently the common and conspicuous lichens have been collected. As exemplified by the numerous common species the lichens of Kashmir exhibit, a close relation to the European lichen flora.

Out of the total of 43 species determined, the nine taxa detailed below in the beginning are reported for the first time from the Indian sub-continent as seen on comparison to the Catalogue by Awasthi (1985). This indicates the richness in the lichen flora of Kashmir as well as the possibilities of more interesting finds if exhaustive collections are undertaken.

1. Verrucaria aethiobola Wahl. ex Achi-Sonamarg; on submerged stones in the streamlet below the foot of the glacier. Thallus crustaceous, effuse, thin, dark to olivaceous black; perithecia hemispherical, partially immersed, up to 3 mm in diam.; perithelial wall black, 28 μ thick; hymenium hyaline, I + red; spores colourless, simple, ellipsoid, 15-28 x 11 μ. The species is distributed in high mountains of Europe and Eastern Asia.

2. Calicium abietinum Pers.—Gulmarg; on bark of conifer tree. Thallus thin, ashy granulose to evanescent; stipe thin, erect, black; disc black, pruinose; spores brown-black, 2-celled, ellipsoid, 11-12 x 3.5-4 μ. The species is widely distributed in the temperate regions of the world.

3. Catillaria atrupurpurea (Schaer.) Th.Fr.—Gulmarg; on dead wood. Thallus evanescent; apothecia eventually flat to convex; spores colourless, 2-celled, 9-12 x 5-6 μ. The species is well distributed in temperate regions of the world and always occurs on dead wood.

4. Stereocaulon condensatum Hoff m.—Pahalgam; on sandy soil along river bank. Primary thallus squamulose, persistent; squamules crowded with brown-black cephalodia containing Stigonema alga; pseudopodetia short (upto 10 mm.), sterile. The species is distributed in temperate Europe, America, and Java.

5. Peltigera praetextata (Florserk) Zopf—Gulmarg to Khilanmarg; on old wooden logs. Thallus characteristically marginally squamulose-isidiate; underside white-veined, sterile. The species is distributed in temperate regions of the world.

6. Pertusaria globulifera (Turn.) Mass. var. discoida (Pers.) Almrb.—Gulmarg to Khilanmarg; on bark of coniferous trees. Thallus suborbicular, crustaceous, cracked-wrinkled, greenish-grey; soredia dense, discoid, large, white. Thallus K-, Cl-, Pd-. The taxon is distributed in the temperate parts of the world.

7. Parmelia glabra Nyl.—Gulmarg to Khilanmarg, Pahalgam and on way to Sonamarg (7,000 ft.); on bark of coniferous trees. Thallus brown, non-isidiate and non-sorediate; underside black with rhizina; medulla white, K-, Cl + red, KCl + red; apothecia upto 5 mm in diam.; spores colourless, simple, ellipsoid, 12-14 x 5-7 μ. The species is distributed in temperate regions of Europe, America and Africa.

8. Parmelia glabra (Lam.) Nyl.—Gulmarg and Pahalgam; on bark of conifer trees. Thallus dark brown, densely isidiate; underside black with branched rhizina; medulla white, K-, Cl + red, KCl + red, Pd--; scarcely fertile; apothecia upto 5 mm. in diam.; spores colourless, simple, oval to ellipsoid, 7-11 x 5-7 μ. The species is distributed in cooler northern regions of the world.

9. Parmelia ulrophyllodes (Vain.) Sav.—Khilanmarg and on way to Sonamarg; on bark of conifer trees. Thallus glaucous grey to pale grey, marginally intermittently sorediate; underside grey to brownish with short rhizina; medulla white, K-, Cl + red, KCl + red. The species is known from western Siberia.

The additional 34 taxa comprising the collections are: