

## A SKIN DISEASE AFFECTING LIMB REGENERATION

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In the Spring of 1979, we encountered a previously unknown skin disease in our young axolotls and Ambystoma maculatum larvae. Our animal populations had been essentially disease-free for the past 10 years.

The disease is characterized by hypertrophy of the epidermis into plaques, ridges or papillae on the limbs and bodies of the animals. Amputated limbs on which the disease is present exhibit various abnormalities of regeneration ranging from complete suppression of regeneration through truncated spike regenerates to regenerates which form half-limbs with one or two digits and a single zeugopodial bone. The skin over the truncated regenerates is heavily pigmented.

The disease usually crops up when the animals are 2-3 months post-hatching. The animals lose weight slowly. Some appear to recover, while others eventually die.

We have had a mycologist examine diseased skin fragments, but so far there has been no evidence of fungus. We are currently attempting to grow bacterial cultures from diseased skin samples, since gentamycin and rifampicin seem to be somewhat, but not completely, effective in suppression (use of these antibiotics was suggested by Warren Fox, Department of Developmental and Cell Biology, University of California, Irvine). We have also preserved specimens of diseased limbs, and these will be sectioned for examination of their histological appearance. The possibility that the disease agent is a virus must also be considered.

The disease appears to be highly contagious. We have sterilized all animal containers and solutions to no avail.

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We normally keep our animals in a 1% Holtfreter solution, and have tried keeping them in 20-50% Holtfreter, as well as immersing the animals for several days in 100% Holtfreter. These conditions do not alter either the contraction or the progression of the syndrome. HELP!