

Animal preferences vs regulatory standards of care

This scenario seems to be exploring a potential conflict between U.S. Government Principle VII¹, which states that “the living conditions of animals should be appropriate for their species and contribute to their health and comfort,” with the cardinal rule of animal research² that all animals should be observed daily for signs of illness, injury, or abnormal behavior. This case asks the question: do we as animal caretakers and welfare personnel provide the most natural habitat for a research animal at the expense of established and regulated standards of care? What is an acceptable way forward in such scenarios?

In the scenario described, are these animals currently involved in a study protocol approved by the university’s IACUC? From simple calculations, Dr. Eaton has six female animals on site. This number seems very small for any approved research protocol. Additionally, are they providing too much space for each animal and in that way also indirectly affecting observation of the animals? According to *the Guide* and the Blue book³, *X. laevis* adults may be housed at stocking densities in the range of one frog per 2–3 L to four frogs per 5–10 L. In this scenario they are stocking at one female frog to about 47.3L of water. This amount of space per animal coupled with the algal cover may directly contribute to the deficiencies in animal observation.

In the wild, *X. laevis* are secretive, private animals and are commonly found in murky water, which provide a visual barrier to predators⁴. Most universities and research centers that use these animals acknowledge this behavioral characteristic and suggest the use of visual barriers, hides, tanks with darkened or opaque sides, and artificial and/or natural plants as appropriate. However, from my reading, not many references suggest letting tanks get significantly covered with algae. As a matter of fact, *The Guide* acknowledges that algal growth is common in aquatic systems, but it recommends limiting algal growth to allow viewing of the animals in their enclosure.

Xenopus sp. are covered under the Public Health Service Policy, which follows and adheres to *The Guide*². Therefore, the inspectors were correct in highlighting the algal overgrowth in the tanks as a barrier to the proper viewing of the animals. In my opinion the scientist and his staff did not show ill-intent but an honest attempt to provide a naturalistic habitat for the animals in their care. They sought the relevant advice and were vigilant in their care of the animals. I do not think it constitutes a significant violation of husbandry standards. I think the inspectors should note the finding in their reports and present their findings to the IACUC. The

IACUC in turn can then investigate if and how Eaton and his staff were able to meet the daily animal observation requirement in the existing housing scenario. All bodies involved—the IACUC, the veterinary staff and the laboratory staff—should then meet to discuss how conditions can be modified to balance the animals’ habitat preferences while still satisfying the regulatory standards of care. 

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