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## Is a Swimming Pool Safe for Macaques? A Discussion

The following discussion took place on the Laboratory Animal Refinement & Enrichment Forum (LAREF) among Heather Kirby [e-mail: [hkirby@wfubmc.edu](mailto:hkirby@wfubmc.edu)], Wake Forest University; Jill Rawlins [[rawlinsj@ohsu.edu](mailto:rawlinsj@ohsu.edu)], Oregon Primate Research Center; Polly Schultz [[schultz11@earthlink.net](mailto:schultz11@earthlink.net)], Wisconsin Primate Research Center; and Natasha Down [[ndown@yorku.ca](mailto:ndown@yorku.ca)], York University. The posted contributions have been edited by Viktor Reinhardt [[viktor@snowcrest.net](mailto:viktor@snowcrest.net)], moderator of the forum.

*Kirby:* “The center where I work has several long-tailed macaque breeding colonies housed in large outdoor enclosures. I am interested in using stock tanks to provide foraging opportunities in the winter and swimming opportunities in the summer. I have heard that cynos are adept swimmers, but is there is a risk of drowning, particularly for infants? Is there danger of one monkey inadvertently drowning another monkey?”

*Rawlins:* “The stock tanks we use have a lip half way up the inside of the tank, so if an infant would fall into the water it could easily get back out. We used these tanks all of last summer and half of the summer before and never encountered any problem. The monkeys who do go under water hold their breath for a surprisingly long time.”

*Schultz:* “I have watched juvenile cynos three months old and older swim with no difficulty. I have never come across one who can’t swim. It seems to be a very natural, instinctive skill for them that they do not have to learn. The only time we had a problem — or let’s say ‘near problem’ — was when an adult female was swimming underwater, and a big male was playing around, like a cat chasing after a mouse, from outside of the pool, and finally jumped on her back. He put his hands around her neck and appeared to be deliberately holding her under in the 3-foot-deep water. After about 15 seconds I panicked, as I thought he was actually drowning her. I rushed to the scene to ‘interfere’, but just at that point he released her and retreated. She shot out of the water like a rocket and was REALLY angry with him, screeching and with rage in her eyes. He looked surprised, and as if he had made a significant error, ran screaming away from her as she chased him down and bit him a good one and repeatedly slapped and pinched him. The whole time he was acting submissively toward her, lip smacking wildly, and ducking as she continued to clobber him.

“The two have been in the pool together many times since then, but the female never takes her eye off the male even when she’s under water (as cynos dive with their eyes open).

“With regard to infants I would perhaps be concerned with a tank if there is not a really easy way for them to

crawl out. I would place PVC tubing arranged like branches of a submerged tree sticking out of the water and providing a bridge between water and the safe rim of the pool.

“Macaques not only enjoy being in water but also playing with water (*Figure 1*).”



*Figure 1:* Playing on the “bathtub”.

*Down:* “We used to give two pair-housed rhesus girls a ‘bathtub’ on Fridays. The tub was simply a rat cage filled with water placed in the tunnel of the two interconnected cages (*Figure 2*). *Tejas* would go under water and keep her eyes open. The other girl, *Kuau*, would dive with her eyes and mouth open! Since the rat cage was transparent, I could see everything. The two were quite hilarious! I am surprised they could fit themselves into the ‘bathtub’ but they loved it! *Tejas* once held her breath while under water for 15 seconds. This is quite impressive, as they were both scared of the tub when I very first introduced it!”



*Figure 2:* Playing in the “bathtub”.

*Reinhardt:* There are a few published articles on the successful use of shallow-water swimming pools for

rhesus and long-tailed macaques — especially juveniles — and for marmosets. Safety or hygienic problems are not mentioned in any of these papers. Here are the references in chronological order, each with a short annotation:

Gilbert, S. G., & Wrenshall, E. (1989). Environmental enrichment for monkeys used in behavioral toxicology studies. In E. F. Segal (Ed.), *Housing, care and psychological wellbeing of captive and laboratory Primates* (pp. 244-254). Park Ridge, NJ: Noyes Publications.

*Young cynos adapt easily to water and are instinctively good swimmers. They will dive with their eyes open looking for raisins and playing with each other.*

Anderson, J. R., Peignot, P., & Adelbrecht, C. (1992). Task-directed and recreational underwater swimming in captive rhesus monkeys (*Macaca mulatta*). *Laboratory Primate Newsletter*, 31[4], 1-4.

<[www.brown.edu/Research/Primate/lpn31-4.html#swim](http://www.brown.edu/Research/Primate/lpn31-4.html#swim)>

*Facilitating thermoregulation and increasing social play are two reasons to consider a swimming facility to be a cheap and clean environmental enrichment.*

Hazlewood, S. J. (2001). From beagles to marmosets – The development of a marmoset breeding cage. *Animal Technology*, 52, 149-152.

*The provision of water baths was found to be of little interest to marmosets, who only used it as a toilet!*

Rock, A., Azzarano, J., Adams, K., Murray, L., & Clark, L. P. (2004). Swimming pools provide additional socialization to group-housed male macaques. *Tech Talk*, 9[4], 1-2.

*A group of five subadult male macaques [probably rhesus] adapted easily to a wading pool filled with about 30-cm-deep water. The animals swam and dived with eyes open and played in the water.*

Rawlins, J. (2005). Stock tanks for yearlong primate enrichment. *Tech Talk*, 10[3], 1-2.

<[www.aalas.org/pdfUtility.aspx?pdf=TT/10\\_3.pdf](http://www.aalas.org/pdfUtility.aspx?pdf=TT/10_3.pdf)>

*Stock tanks are used year-round as enrichment devices for group-housed rhesus macaques — for swimming and playing in about 30-cm-deep water during the summer and foraging during the winter.*