

Scientists' Statement Regarding Captive Cetaceans

Odontocetes (toothed whales, dolphins and porpoises) are among the most intelligent and socially complex mammals.¹ As marine mammal biologists, we believe that odontocete species inherently cannot fully adapt to confinement in zoos and aquariums. All odontocetes are wide-ranging and share certain biological and ecological characteristics that do not allow them to *thrive* in zoos and aquariums,² and this is particularly true for the larger species such as orcas (*Orcinus orca*).

When dolphins were first commercially displayed to the public some 80 years ago, the world knew little about their ecology and behavior. Much of what researchers learned about odontocetes in the following decades came from studying them in captivity. However, studies on free-ranging animals, starting in the late 1960s and early 1970s and continuing to today, have greatly expanded knowledge on odontocete biology and ecology. At a minimum, the maintenance of odontocetes in commercial captive display facilities for entertainment purposes is no longer supported or justified by the growing body of science on their biological needs.

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¹ See, e.g., Hooker, S. 2009. Toothed whales, overview. Pp. 1252-1260, *In*: W.F. Perrin, B. Wursig, and J.K. Thewissen (eds.) *Encyclopedia of Marine Mammals* (2nd edition), Academic Press: New York, NY. 1316 pp; Mann, J., Connor, R.C., Tyack, P.L., and Whitehead, H. (eds.) 2000. *Cetacean Societies*, University of Chicago Press: Chicago. 433 pp; Marino, L., Butti, C., Connor, R.C., Fordyce, R.E., Herman, L.M., Hof, P.R., Lefebvre, L., Lusseau, D., McCowan, B., Nimchinsky, E.A., Pack, A.A., Reidenberg, J.S., Reiss, D., Rendell, L., Uhen, M.D., Van der Gucht, E., and Whitehead, H. 2008. A claim in search of evidence: reply to Manger's thermogenesis hypothesis of cetacean brain structure. *Biol. Rev.* 83: 417-440.

² See, e.g., Clubb, R. and Mason, M. 2003. Captivity effects on wide-ranging carnivores. *Nature* 425: 473-474; Forcada, J. 2009. Distribution. Pp. 327-333, *In*: W.F. Perrin, B. Wursig, and J.K. Thewissen (eds.) *Encyclopedia of Marine Mammals* (2nd edition), Academic Press: New York, NY. 1316 pp; Jett, J. and Ventre, J. 2012. Orca (*Orcinus orca*) captivity and vulnerability to mosquito-transmitted viruses. *J. Mar. Animals Ecol.* 5: 9-16; Jett, J. and Ventre, J. 2015. Captive killer whale (*Orcinus orca*) survival. *Mar. Mamm. Sci.* 31: 1362-1377; Small, R.J. and DeMaster, D.P. 1995. Survival of five species of captive marine mammals. *Mar. Mamm. Sci.* 11: 209-226; Ugaz, C., Valdez, R.A., Romano, M.C., and Galindo, F. 2013. Behavior and salivary cortisol of captive dolphins (*Tursiops truncatus*) kept in open and closed facilities. *J. Vet. Beh.* 8: 285-290.