

## BRIEF BIOGRAPHICAL SKETCH

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<http://www.mbl.edu/bell/current-faculty/hanlon/>

### (a) PROFESSIONAL PREPARATION

Florida State University, Tallahassee, FL	Biology	BS	1969
University of Miami, R.S.M.A.S., Miami, FL	Marine Biol. Sci.	MS	1975
University of Miami, R.S.M.A.S., Miami, FL	Marine Biol. Sci.	PhD	1978
Cambridge University, Cambridge, England	Ethology	NATO Postdoc	1981-1982

### (b) APPOINTMENTS

Senior Scientist	1995-	Bell Center, MBL
Professor (MBL)	2010-	Ecology & Evolutionary Biology, Brown University
Member	2019-	Consortium for Advanced Sci. & Engin., U Chicago
Director	2012-2015	MBL Program in Sensory Physiology and Behavior
Founding Director	1995	Marine Resources Center, MBL
President	1997-2012	Sigma Xi, Woods Hole Chapter
Member and Co-author	1997-1998	Committee on New and Emerging Models in Biomedical & Behavioral Research, NRC, Natl. Acad. of Sciences
Director	1994-1996	NIH National Resource Center for Cephalopods, UTMB
Director-at-Large	1993-1996	Board of Directors for National Sigma Xi
Division Chief	1984-1995	Marine Biomedical Institute, UTexMedBranch (UTMB)
Professor	1989-1995	School of Medicine, Psych & Behav Sci, UTMB
Associate Professor	1985-1989	School of Medicine, Psych & Behav Sci, UTMB
Assistant Professor	1982-1985	School of Medicine, Psych & Behav Sci, UTMB

### (c) PRODUCTS

#### Sample publications that represent Hanlon lab research (*selected from 240 journal papers*)

Gonzalez-Bellido, P.T., Scaros, A.T., **Hanlon, R.T.** and Wardill, T.J. 2018. Neural control of dynamic 3-dimensional skin papillae for cuttlefish camouflage. *iScience*, doi:10.1016/j.isci.2018.01.001

**Hanlon, R.T.**, Vecchione, M. & Allcock, L. 2018. *Octopus, Squid and Cuttlefish: a visual, scientific guide to the ocean's most advanced invertebrates*. University of Chicago Press. 224pp.

**Hanlon, R.T.** & Messenger, J.B. 2018. *Cephalopod Behaviour*. Cambridge U. Press 365pp.

Panetta, D., Buresch, K., and **Hanlon, R.T.** 2017. Dynamic masquerade with morphing 3D skin in cuttlefish. *Biology Letters* 13: 20170070 (featured in *Nature* Vol 544 Research Highlights)

Pikul, J.H., Li, S., Bai, H., **Hanlon, R.T.**, Cohen, I. and Shepherd, R.F. 2017. Stretchable surfaces with programmable 3-D texture morphing for synthetic camouflaging skins. *Science* 358: 210-214.

Yu, C, Li, Y., Zhang, X., Huang, X., Malyarchuk, V., Wang, S. Shi, Y., Gao, L., Su, Y., Zhang, Y., Xu, H., **Hanlon, R.** and Rogers, J. 2014. Adaptive optoelectronic camouflage systems with designs inspired by cephalopod skins. *Proceedings of the National Academy of Sciences*: 111 (36): 12998-13003.

**Hanlon, R.T.**, Chiao, C.-C., Mäthger, L.M. and Marshall, N.J. 2013. A fish-eye view of cuttlefish camouflage using in-situ spectrometry. *Biological Journal of the Linnean Society* 109 (3): 535-551.

Akkaynak, D., Allen, J.J., Mäthger, L.M., Chiao, C.C. and **Hanlon, R.T.** 2013. Quantification of cuttlefish (*Sepia officinalis*) camouflage: a study of color and luminance using *in situ* spectrometry. *J. Comp. Physiol A*. 199 (3): 211-225.

Chiao CC, Wickiser JK, Allen JJ, Genter B, **Hanlon RT.** 2011. Hyperspectral imaging of cuttlefish camouflage indicates good color match in the eyes of fish predators. *Proceedings of the National Academy of Sciences USA* 108: 9148-9153.

Mooney, T. A., **Hanlon, R.T.**, Christensen-Dalsgaard, J., Madsen, P.T., Ketten, D.R. and Nachtigall, P.E. 2010. Hearing by the longfin squid (*Loligo pealeii*) studied with auditory evoked potentials: sensitivity to low-frequency particle motion and not pressure. *Journal of Experimental Biology* 213:3748-3759.

**Hanlon RT**, Chiao CC, Mäthger, L.M., Barbosa A, Buresch KC and Chubb, C. 2009. Cephalopod dynamic camouflage: bridging the continuum between background matching and disruptive coloration. *Philosophical Transactions of the Royal Society B* 364: 429-437.

**Hanlon, R.T.** 2007. Cephalopod dynamic camouflage. *Current Biology* 17 (11): R400-R405.

**Hanlon, R.T.**; Shashar, N. 2003. Aspects of the sensory ecology of cephalopods. In: *Sensory Processing in the Aquatic Environment*. Collin, S.P.; Marshall, N.J. (eds.). Springer-Verlag. Pp. 266-282.

#### **(d) SYNERGISTIC ACTIVITIES**

- Public outreach & education are promoted continually through print media (Natl Geo Magazine, Discover, Natural History, New York Times Science Section, etc.), and numerous television appearances (ca. 30 spots since 1995; NOVA special 2011) & radio programs (e.g. 2011 NPR Science Friday) and >50 tours/yr. at MBL
- TED 2019 talk on cephalopod neuroscience and behavior (1.2 million hits)
- Plenary addresses and major invited talks (ca. 15 in last 5 yrs) have been delivered at Gordon Conference (Italy), International Ethology Conferences, Pan Amer. Pigment Cell Research, HHMI predator/prey symposium, Ocean Sciences Meeting, etc.
- A teaching DVD with underwater video has been produced and distributed (by request) to > 500 teachers and grad students nationally and internationally.
- Innovative “Art & Science of Visual Perception” studio class taught in 2013 at Granoff Center for Creative Arts with students from Brown Univ. and Rhode Island School of Design.