

Curriculum Vitae Ann F. Budd

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EDUCATIONAL AND PROFESSIONAL HISTORY

1. Higher Education

1978 Ph.D., Earth & Planetary Science, Johns Hopkins University, Baltimore, MD
1975 M.A., Earth & Planetary Science, Johns Hopkins University, Baltimore, MD
1973 B.A., cum laude, Geology, Lawrence University, Appleton, WI

2. Professional and Academic Positions

2016-present Research Associate, Paleontological Research Institute, Ithaca, NY.
2015-present Professor Emeritus, University of Iowa.
2011-2015 F. Wendell Miller Professor, University of Iowa.
2005-present Research Associate, National Museum of Natural History, Smithsonian Institution, Washington, DC.
1998-2004 Chair, Department of Geoscience, University of Iowa.
1995-2015 Professor of Earth and Environmental Sciences, University of Iowa.
1989-95 Associate Professor of Geology, University of Iowa.
1984-89 Assistant Professor of Geology, University of Iowa.
1984 Postdoctoral Fellow, Swiss National Science Foundation, Naturhistorisches Museum Basel.
1982 Postdoctoral Fellow, US/France Cooperative Science Program (National Science Foundation), Muséum National d'Histoire Naturelle, Institut de Paléontologie, Paris.
1978-84 Adjunct Assistant Professor, University of Iowa.
1978-79 Instructor, Augustana College, Rock Island, Illinois.
1976 Lecturer, California State University at Long Beach.

3. Honors and Awards

2015 SEPM Raymond C. Moore Medal for "Excellence in Paleontology"
2011 Iowa Regents Award for Faculty Excellence
2006 Paleontological Society Fellow
2004 *PALAIOS* Outstanding Journal Paper of the Year, Honorable Mention
["Comparison of Caribbean coral reef communities before and after Plio-Pleistocene faunal turnover: Analyses of two Dominican Republic reef sequences" by J.S. Klaus and A.F. Budd]

- 1998 PALAIOS Outstanding Journal Paper of the Year, Honorable Mention [“Stepwise faunal change during evolutionary turnover: a case study from the Neogene of Curaçao, Netherlands Antilles” by A.F. Budd, R.A. Petersen, and D.F. McNeill]
- 1998 Gilbert Harris Award for Excellence in Systematic Paleontology (Paleontological Research Institution)

4. Memberships

American Association for the Advancement of Science
 Geological Society of America
 International Association for the Study of Fossil Cnidaria
 International Society for Reef Studies
 Paleontological Society of America
 Sigma Xi
 Society of Economic Paleontologists and Mineralogists (SEPM)

SCHOLARSHIP

1. Publications

a. Refereed

- **Professional books and special issues (edited)**

- Pandolfi, J.M. and A.F. Budd (eds), 2012. Festschrift in honour of Jeremy B.C. Jackson and his contributions to marine evolutionary ecology. Special Issue, *Evolutionary Ecology* 26(2), p.227-448.
- Nehm, R. H. and A. F. Budd (eds), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- Miller, D.J. and A.F. Budd (eds), 2001. Morphology and Evolution of the late Cenozoic marine biota of tropical America. Special Issue, *Journal of Paleontology* 75(3), p. 473-751.
- Jackson, J.B.C., A.F. Budd, and A.G. Coates (eds), 1996, *Evolution and Environment in Tropical America*, University of Chicago Press, Chicago, 425 pp.

- **Monographs**

- (M6) Huang, D., R. Arrigoni, F. Benzoni, H. Fukami, N. Knowlton, N.D. Smith, J. Stolarski, L.M. Chou, and A.F. Budd, 2016. Taxonomic classification of the reef coral family Lobophylliidae (Cnidaria: Anthozoa: Scleractinia). *Zoological Journal of the Linnean Society* 178: 436–481, doi: 10.1111/zoj.12391.
- (M5) Huang, D., F. Benzoni, H. Fukami, N. Knowlton, N. D. Smith, and A. F. Budd, 2014. Taxonomic classification of the reef coral families Merulinidae, Montastraeidae and Diploastraeidae (Cnidaria: Anthozoa: Scleractinia). *Zoological Journal of the Linnean Society* 171: 277-355, doi: 10.1111/zoj.12140.

- (M4) Budd, A. F., Fukami H., Smith N. D., Knowlton N, 2012. Taxonomic classification of the reef coral family Mussidae (Cnidaria: Anthozoa: Scleractinia). *Zoological Journal of the Linnean Society* 166: 465-529, doi: 10.1111/j.1096-3642.2012.00855.x.
- (M3) Budd, A.F. and K.G. Johnson. 1999. Neogene Paleontology in the Northern Dominican Republic. The Family Faviidae (Anthozoa: Scleractinia). Part II. The Genera *Caulastraea*, *Favia*, *Diploria*, *Manicina*, *Hadrophyllia*, *Thysanus*, and *Colpophyllia*. *Bulletins of American Paleontology* 109 (356): 5-83, pls. 1-21.
- (M2) Budd, A.F. 1991. Neogene Paleontology in the Northern Dominican Republic. 11. The Family Faviidae (Anthozoa: Scleractinia). Part I. *Bulletins of American Paleontology* 101 (338): 5-83, pls. 1-29.
- (M1) Foster, A.B. 1986. Neogene Paleontology in the Northern Dominican Republic. 3. The Family Poritidae (Anthozoa: Scleractinia). *Bulletins of American Paleontology* 90 (325): 45-123, pls. 15-38.

- **Journal articles and edited volumes**

- (100) Prada, C., B. Hanna, A.F. Budd, C.I Woodley, J. Schmutz, J. Grimwood, R. Iglesias-Prieto, J.M. Pandolfi, D. Levitan, H. Kitano, N. Knowlton, M. DeGiorgio, M. Medina (2016). Empty niches after extinctions increase population sizes of modern corals. *Current Biology*, <http://dx.doi.org/10.1016/j.cub.2016.09.039>.
- (99) O’Dea, A., H.A. Lessios, A. G. Coates, R.I. Eytan, S.A. Restrepo-Moreno, A.L. Cione, L.S. Collins, A. de Queiroz, D.W. Farris, R.D. Norris, R.F. Stallard, M.O. Woodburne, O. Aguilera, M.P., Aubry, W.A. Berggren, A.F. Budd, M.A. Cozzuol, S.E. Coppard, H. Duque-Caro, S. Finnegan, G.M. Gasparini, E.L. Grossman, K.G. Johnson, L.D. Keigwin, N. Knowlton, E.G. Leigh, J.S. Leonard-Pingel, P.B. Marko, N.D. Pyenson, P.G. Rachello-Dolmen, E. Soibelzon, L. Soibelzon, J.A. Todd, G.J. Vermeij. J.B.C. Jackson (2016). Formation of the Isthmus of Panama. *Science Advances*, 17 Aug 2016: Vol. 2, no. 8, e1600883 DOI: 10.1126/sciadv.1600883.
- (98) Arrigoni, R., F. Benzoni, D. Huang, H. Fukami, C.A. Chen, M.L. Berumen, M. Hoogenboom, D.P. Thomson, B.W. Hoeksema, A.F. Budd, Y. Zayas, T.I. Terraneo, Y. F. Kitano, A.H. Baird (2016). Integrating genetics and morphology: revision of the scleractinian genera *Micromussa* and *Homophyllia* (Lobophylliidae) with a description of two new species and one new genus. *Contributions to Zoology* 85: 387-422.
- (97) Budd, A.F. and F.R. Bosellini (2016). Revision of Oligocene Mediterranean meandroid corals in the scleractinian families Mussidae, Merulinidae, and Lobophylliidae. *Journal of Systematic Palaeontology* 14:9, 771-798, DOI:10.1080/14772019.2015.1102171.
- (96) Cordie, D.R. and A.F. Budd (2016). Histological Data in a Combined Phylogenetic Analysis of Scleractinian Reef Corals. *Journal of Morphology* 277:494-511, DOI 10.1002/jmor.20514.
- (95) Budd, A.F. and J.M. Pandolfi (2016). Contrasting patterns of speciation in reef corals and their relationship to population connectivity, pp.217-237. In: Allmon, W and M. Yacobucci (editors), 2014. *Species and speciation in the fossil record*. University of Chicago Press, Chicago, 384pp.
- (94) Huang, D., F. Benzoni, R. Arrigoni, A.H. Baird, M.L. Berumen, J. Bouwmeester, L.M. Chou, H. Fukami, W.Y. Licuanan, E.R. Lovell, R. Meier, P.A. Todd & A.F. Budd (2014). Towards a phylogenetic classification of reef corals: the Indo-Pacific genera

- Merulina, Goniastrea and Scapophyllia (Scleractinia, Merulinidae). *Zoologica Scripta* 43: 531-548, doi:10.1111/zsc.12061.
- (93) Edmunds PJ, Adjero M, Baskett ML, Baums IB, Budd AF, Carpenter RC, Fabina NS, Fan TY, Franklin EC, Gross K [...] Gates, RD (2014) Persistence and Change in Community Composition of Reef Corals through Present, Past, and Future Climates. *PLoS ONE* 9(10): e107525. doi:10.1371/journal.pone.0107525
- (92) Schwartz, S.A., A.F. Budd, and D.B. Carlon, 2012. Molecules and fossils reveal punctuated diversification in Caribbean “faviid” corals. *BMC Evolutionary Biology* 12, 123, doi: 10.1186/1471-2148-12-123.
- (91) van Woessik, R., E.C. Franklin, J. O’Leary, T.R. McClanahan, J.S. Klaus, and A.F. Budd, 2012. Hosts of the Plio-Pleistocene past reflect modern-day coral vulnerability. *Proceedings of the Royal Society B* 279:2448-2456, doi: 10.1098/rspb.2011.2621.
- (90) Kongjandtre, N., T. Ridgeway, L.G. Cook, T. Huelsken, A.F. Budd, and O. Hoegh-Guldberg, 2012. Taxonomy and species boundaries in the coral genus *Favia* Milne Edwards and Haime, 1857 (Cnidaria: Scleractinia) from Thailand revealed by morphological and genetic data. *Coral Reefs* 31:581-601, doi: 10.1007/s00338-011-0869-5.
- (89) Budd, A.F., F. L. D. Nunes, E. Weil, and J. M. Pandolfi, 2012. Polymorphism in a common Atlantic reef coral (*Montastraea cavernosa*) and its long-term evolutionary implications. *Evolutionary Ecology* 26:265-290, doi: 10.1007/s10682-010-9460-8.
- (88) Klaus, J.S., D.M. McNeill, A.F. Budd, and A.G. Coates, 2012. Neogene reef coral assemblages of the Bocas del Toro region, Panama: the rise of *Acropora palmata*. *Coral Reefs* 31:191-203, doi: 10.1007/s00338-011-0835-2.
- (87) McNeill, D.F., J.S. Klaus, A.F. Budd, B. Lutz, and S. Ishman, 2012. Late Neogene Chronology and Sequence Stratigraphy of Mixed Carbonate-Siliciclastic Deposits of the Cibao Basin, Dominican Republic. *Geological Society of America Bulletin* 124: 35-58, doi: 10.1130/B30391.1.
- (86) Budd, A.F., J.S. Klaus, and K.G. Johnson, 2011. Cenozoic diversification and extinction patterns in Caribbean reef corals: A review. *Paleontological Society Papers* 17: 79-94.
- (85) Carlon, D.B., A.F. Budd, C. Lippe, and R.L. Andrew, 2011. The quantitative genetics of incipient speciation: heritability and genetic correlations of skeletal traits in populations of diverging *Favia fragum* ecomorphs. *Evolution* 65: 3428-3447, doi: 10.1111/j.1558-5646.2011.01389.x
- (84) Klaus, J.S., B.P. Lutz, D.F. McNeill, A.F. Budd, K. G. Johnson, and S.E. Ishman. 2011. Rise and fall of Pliocene free-living corals in the Caribbean and western Atlantic. *Geology* 39: 375-378, doi: 10.1130/G31704.1.
- (83) Budd, A.F. and J. Stolarski. 2011. Corallite wall and septal microstructure in scleractinian reef corals: Comparison of molecular clades within the family Faviidae. *Journal of Morphology* 272: 66-88, doi:10.1002/jmor.10899.
- (82) Budd, A.F. 2010. Tracing the long-term evolution of a species complex and its relationship to environmental change: Examples from the *Montastraea “annularis”* complex. *Paleoworld* 19: 348-356, doi:10.1016/j.palwor.2010.09.001.
- (81) Budd A.F., S.L. Romano, N.D. Smith, and M.S. Barbeitos. 2010. Rethinking the phylogeny of scleractinian corals: A review of morphologic and molecular data. *Integrative and Comparative Biology* 50: 411-427, doi:10.1093/icb/icq062.

- (80) Budd, A.F. and J.M. Pandolfi. 2010. Evolutionary novelty is concentrated at the edge of species distributions. *Science* 328:1558-1561, doi:10.1126/science.1188947.
- (79) Wallace, C.C. and A.F. Budd. 2009. Mirror-image fossils reveal colony form of extinct Curaçao *Isopora*. *Coral Reefs* 28: 715.
- (78) Budd, A. F. and J. Stolarski. 2009. Searching for new morphological characters in the systematics of scleractinian reef corals: Comparison of septal teeth and granules between Atlantic and Pacific Mussidae. *Acta Zoologica* 90: 142-165, doi:10.1111/j.1463-6395.2008.00345.x.
- (77) Lutz, B.P., S.E. Ishman, D.F. McNeill, J.S. Klaus, and A.F. Budd. 2008. Late Neogene planktonic foraminifera of the Cibao Valley (northern Dominican Republic); Biostratigraphy and paleoceanography. *Marine Micropaleontology* 69: 282-296.
- (76) Budd, A. F. and C. C. Wallace. 2008. First record of the Indo-Pacific reef coral genus *Isopora* in the Caribbean region: Two new species from the Neogene of Curaçao, Netherlands Antilles. *Palaeontology* 51: 1387-1402.
- (75) Pandolfi, J. M. and A. F. Budd. 2008. Morphology and ecological zonation of Caribbean reef corals: the *Montastraea* 'annularis' species complex. *Marine Ecology Progress Series* 369: 89-102.
- (74) Fukami, H, C. A. Chen, A. F. Budd, A. Collins, C. Wallace, Y.-Y. Chuang, C. Chen, C.-F. Dai, K. Iwao, C. Sheppard, N. Knowlton . 2008. Mitochondrial and nuclear genes suggest that stony corals are monophyletic but most families of stony corals are not (Order Scleractinia, Class Anthozoa, Phylum Cnidaria). *PLoS One* 3(9):e3222(1-9).
- (73) Johnson, K. G., J. B. C. Jackson, and A. F. Budd, 2008. Caribbean reef development was independent of coral diversity over 28 million years. *Science* 319(5869): 1521-1523.
- (72) Denniston, R. F., Y. Asmeron, V. Y. Polyak, D. F. McNeill, J. S. Klaus, P. Cole, and A. F. Budd, 2008. Caribbean Chronostratigraphy Refined with U-Pb Dating of a Miocene Coral. *Geology* 36: 151-154.
- (71) Nehm, R. H. and A. F. Budd, 2008. Paleobiological research in the Cibao Valley of the northern Dominican Republic. pp. 1-20. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (70) McNeill, D. F., J. S. Klaus, C. C. Evans, and A.F. Budd, 2008. An overview of the regional geology and stratigraphy of the Neogene deposits of the Cibao Valley, Dominican Republic. pp. 21-46. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (69) Denniston, R. F., S. C. Penn, and A. F. Budd, 2008. Constraints on late Miocene shallow marine seasonality for the central Caribbean using oxygen isotope and Sr/Ca ratios in a fossil coral. pp. 47-62. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (68) Budd, A. F. and J. S. Klaus, 2008. Early evolution of the *Montastraea* "annularis" species complex (Anthozoa: Scleractinia): Evidence from the Mio-Pliocene of the Dominican Republic. pp. 85-124. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.

- (67) Beck, B. R. and A. F. Budd, 2008. Evolutionary patterns within the reef coral *Siderastrea* in the Mio-Pliocene of the Dominican Republic. pp. 125-146. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (66) Schultz, H. A. and A. F. Budd, 2008. Neogene evolution of the reef coral species complex *Montastraea "cavernosa"*. pp. 147-170. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (65) Klaus, J. S., A. F. Budd, K. G. Johnson, and D. F. McNeill, 2008. Assessing community change in Miocene to Pliocene coral assemblages of the northern Dominican Republic. pp. 193-224. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (64) Johnson, K.G., A.F. Budd, J.S. Klaus, and D.F. McNeill, 2008. The impact of fossils from the northern Dominican Republic on origination estimates for Miocene and Pliocene Caribbean reef corals. pp. 253-280. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (63) Nehm, R. H., A. F. Budd, and J. Luna, 2008. Science education and the Dominican Republic project. pp. 281-300. In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (62) Budd, A. F., T. S. Adrain, J. W. Park, J. S. Klaus, and K. G. Johnson, 2008. The Neogene Marine Biota of Tropical America ('NMITA') database: Integrating data from the Dominican Republic. pp. 301-310 In: Nehm, R.H. and A.F. Budd (editors), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Springer, New York, 310pp.
- (61) Maier, K.L, J.S. Klaus, D.F. McNeill, and A.F. Budd, 2007. A late Miocene low-nutrient window for Caribbean reef formation. *Coral Reefs* 26, 5pp.
- (60) Klaus, J.S., A.F. Budd, J.M. Heikoop, and B.W. Fouke, 2007. Environmental controls on corallite morphology in the reef coral *Montastraea annularis*. *Bulletin of Marine Science* 80: 233-260.
- (59) Nehm, R.H. and A. F. Budd, 2006. Missing "Links" in Bioinformatics Education: Expanding Students' Concepts of Bioinformatics using a Biodiversity Database of Living and Fossil Corals. *The American Biology Teacher* 68:e91-e97.
- (58) Budd, A.F. and N.D. Smith, 2005. Diversification of a new Atlantic clade of scleractinian reef corals: insights from phylogenetic analysis of morphologic and molecular data. *Paleontological Society Papers* 11: 103-128.
- (57) Holcomb, M., J.M. Pandolfi, I.G. Macintyre, and A.F. Budd. 2004. Use of X-radiographs to distinguish members of the *Montastraea "annularis"* reef coral species complex. In: D.G. Fautin, J.A. Westfall, P. Cartwright, M. Daly & C.R. Wyttenbach, eds. *Coelenterate biology 2003: Trends in research in Cnidaria and Ctenophora. Hydrobiologia* 530: 211-222.
- (56) Budd, A.F. and J.M. Pandolfi. 2004. Overlapping species boundaries and hybridization within the *Montastraea "annularis"* reef coral complex in the Pleistocene of the Bahama Islands. *Paleobiology* 30: 396-425.

- (55) Fukami, H., A.F. Budd, D.R. Levitan, J. Jara, R. Kersanach, and N. Knowlton. 2004. Geographic differences in species boundaries among members of the *Montastraea annularis* complex based on molecular and morphological markers. *Evolution* 58: 324-337.
- (54) Fukami, H., A.F. Budd, G. Paulay, A. Solé-Cava, C.A. Chen, K. Iwao, and N. Knowlton. 2004. Conventional Taxonomy Obscures Deep Divergence between Pacific and Atlantic Corals. *Nature* 427: 832-835.
- (53) Klaus, J.S. and A.F. Budd. 2003. Comparison of Caribbean coral reef communities before and after Plio-Pleistocene faunal turnover: Analyses of two Dominican Republic reef sequences. *PALAIOS* 18:3-21.
- (52) López-Pérez, R.A., H. Reyes-Bonilla, A.F. Budd, and F. Correa-Sandoval, 2003. The taxonomic status of *Porites sverdrupi*, an endemic coral of the Gulf of California. *Ciencias Marinas* 29(4B): 677-691.
- (51) Carlon, D.B. and A.F. Budd. 2002. Incipient speciation across a depth gradient in a scleractinian coral? *Evolution* 56: 2227-2242.
- (50) Pandolfi, J.M., C.E. Lovelock, and A.F. Budd. 2002. Character release following extinction in a Caribbean reef coral species complex. *Evolution* 56: 479-501.
- (49) Getty, S.R., Y. Asmerom, T. Quinn, and A.F. Budd. 2001. Accelerated Pleistocene coral extinctions in the Caribbean Basin shown by uranium-lead (U-Pb) dating. *Geology* 29: 639-642.
- (48) Budd, A.F. and J.S. Klaus. 2001. The origin and early evolution of the *Montastraea "annularis"* species complex (Anthozoa: Scleractinia). *Journal of Paleontology* 75(3): 527-545.
- (47) Budd, A. F., C.T. Foster Jr., J.P. Dawson, and K.G. Johnson. 2001. The Neogene Marine Biota of Tropical America ("NMITA") Database: Accounting for biodiversity in paleontology. *Journal of Paleontology* 75(3), 743-751.
- (46) Budd, A.F. and K.G. Johnson. 2001. Contrasting evolutionary patterns in rare and abundant species during Plio-Pleistocene turnover of Caribbean reef corals. In: J.B.C. Jackson, S. Lidgard, and F.K. McKinney (eds), *Evolutionary Patterns: Growth, Form, and Tempo in the Fossil Record*. Univ. Chicago Press, Chicago, p.295-325.
- (45) Knowlton, N. and A.F. Budd. 2001. Recognizing coral species past and present. In: J.B.C. Jackson, S. Lidgard, and F.K. McKinney (eds), *Evolutionary Patterns: Growth, Form, and Tempo in the Fossil Record*. Univ. Chicago Press, Chicago, p.97-119.
- (44) Budd, A.F. and C.M. Manfrino. 2001. Coral assemblages in Neogene to Recent cores from the Bahamas platform and their use in paleoenvironmental interpretation. *SEPM Spec. Publ. (Concepts Sed. Geology)* No. 70, p. 41-59.
- (43) McNeill, D.F., A.G. Coates, A.F. Budd and P.F. Borne. 2000. Integrated paleontologic and paleomagnetic stratigraphy of the upper Neogene deposits around Limon, Costa Rica: A coastal emergence record of the Central American Isthmus. *Geological Society of America Bulletin* 112: 963-981.
- (42) Budd, A.F. 2000. Diversity and extinction in the Cenozoic history of Caribbean reefs (Invited review). *Coral Reefs* 19: 25-35.
- (41) Budd, A.F. and K.G. Johnson. 1999. Origination preceding extinction during Late Cenozoic turnover of Caribbean reefs. *Paleobiology* 25: 188-200.

- (40) Budd, A.F., K.G. Johnson, T.A. Stemann, and B.H. Tompkins. 1999. Pliocene to Pleistocene reef coral assemblages in the Limon Group of Costa Rica. In: L.S. Collins and A.G. Coates (eds), *A Paleobiotic Survey of the Caribbean Faunas from the Neogene of the Isthmus of Panama. Bulletins of American Paleontology*, Special Volume, No. 357: 119-158.
- (39) Budd, A.F., R.A. Petersen, and D.F. McNeill. 1998. Stepwise faunal change during evolutionary turnover: a case study from the Neogene of Curaçao, Netherlands Antilles. *Palaios* 13: 167-185.
- (38) Budd, A.F. and D.F. McNeill. 1998. Zooxanthellate Scleractinian Corals from the Bowden Shell Bed, SE Jamaica. *Contributions to Tertiary and Quaternary Geology* 35: 49-65.
- (37) González, L.A., H.M. Ruiz, B.E. Taggart, A.F. Budd, and V. Monell. 1997. Geology of Isla de Mona, Puerto Rico. In: H.L. Vacher and T. Quinn (eds), *Geology and hydrogeology of carbonate islands*. Elsevier, Amsterdam, p. 327-358.
- (36) McNeill, D.F., A.F. Budd, P.F. Borne. 1997. An Earlier (Late Pliocene) First Appearance of the Reef-building Coral *Acropora palmata*: Stratigraphic and evolutionary implications. *Geology* 25: 891-894.
- (35) Budd, A.F. and K.G. Johnson. 1997. Coral reef community dynamics over 8 myr of evolutionary time: Stasis and turnover. *Proceedings of the 8th International Coral Reef Symposium* 1: 423-428.
- (34) Budd, A.F. and K.G. Johnson. 1996. Recognizing species of Late Cenozoic Scleractinia and their evolutionary patterns. *Paleontological Society Papers* 1: 59-79.
- (33) Collins, L.S., A.F. Budd, and A.G. Coates. 1996. Earliest Evolution associated with closure of the Tropical American seaway. *Proceedings of the National Academy of Sciences* 93: 6069-6072.
- (32) Budd, A.F., F. Bosellini, and T.A. Stemann. 1996. Systematics of the Oligocene to Miocene reef coral *Tarbellastraea* in the Northern Mediterranean. *Palaeontology* 39: 515-560.
- (31) Jackson, J.B.C., A.F. Budd, and J.M. Pandolfi. 1996. The shifting balance of natural communities? In: D. Erwin, D. Jablonski and J. Lipps (eds), *Evolutionary Paleobiology: essays in honor of James W. Valentine*, Univ. Chicago Press, Chicago, p. 89-122.
- (30) Johnson, K.G. and A.F. Budd. 1996. Three-dimensional landmark techniques for the recognition of reef coral species. In: L.F. Marcus, M. Corti, A. Loy, G.J.P. Naylor and D. Slice, (eds), *Advances in Morphometrics*. NATO ASI Series, v. A284, Plenum, New York, p. 345-353.
- (29) Jackson, J.B.C. and A.F. Budd. 1996. Evolution and environment: introduction and overview. In: J.B.C. Jackson, A.F. Budd, and A.G. Coates (eds), *Evolution and Environment in Tropical America*, Univ. Chicago Press, Chicago, p. 1-20.
- (28) Budd, A.F., K.G. Johnson, and T.A. Stemann. 1996. Plio-Pleistocene turnover and extinctions in the Caribbean reef coral fauna. In: J.B.C. Jackson, A.F. Budd, and A.G. Coates (eds), *Evolution and Environment in Tropical America*, Univ. Chicago Press, Chicago, p. 168-204.
- (27) Premoli Silva, I., A. Nicora, A. Arnaud-Vanneau, A.F. Budd, and G. Camoin. 1995. Paleobiogeographic evolution of shallow-water organisms from the Aptian to the Eocene

- in the western Pacific. In: Haggerty, J.A.,(ed.), *Proceedings of the Ocean Drilling Program, Scientific Results* 144: 887-893; College Station, Tex.
- (26) Budd, A.F., K.G. Johnson, and J.C. Edwards. 1995. Caribbean reef coral diversity during the early to middle Miocene: an example from the Anguilla Formation. *Coral Reefs* 14(2), 109-117.
 - (25) Johnson, K.G., A.F. Budd, and T.A. Stemmann. 1995. Extinction selectivity and ecology of Neogene Caribbean reef corals. *Paleobiology* 21: 52-73.
 - (24) Lathuilière, B. and A.F. Budd. 1994. Analyse d'image et analyse morphofonctionnelle des coraux. *C.R. Acad. Sci. Paris II*, 318: 1273-1276.
 - (23) Budd, A.F. and H. Guzman. 1994. *Siderastrea glynni*, a new species of scleractinian coral (Cnidaria: Anthozoa) from the eastern Pacific. *Proceedings of the Biological Society of Washington* 107: 591-599.
 - (22) Budd, A.F., K.G. Johnson, and D.C. Potts. 1994. Recognizing morphospecies of colonial reef corals. I. Landmark-based methods. *Paleobiology* 20: 484-505.
 - (21) Budd, A.F., T.A. Stemmann, and K.G. Johnson. 1994. Stratigraphic distributions of genera and species of Neogene to Recent Caribbean reef corals. *Journal of Paleontology* 68: 951-977.
 - (20) Potts, D.C., A.F. Budd, and R.L. Garthwaite. 1993. Soft tissue vs. skeletal approaches to species recognition and phylogeny reconstruction in corals. *Courier Forschungs-institut Senckenberg* 164: 221-231.
 - (19) Budd, A.F. 1993. Variation within and among morphospecies of *Montastraea*. *Courier Forschungs-institut Senckenberg* 164: 241-254.
 - (18) Budd, A.F., K.O. Mann, and H. Guzman. 1993. Environmental interpretation using insoluble residues within reef-coral skeletons: problems, pitfalls, and preliminary results. *Coral Reefs* 12: 31-42.
 - (17) Budd, A.F. and A.G. Coates. 1992. Non-progressive evolution in a clade of Cretaceous *Montastraea* - like corals. *Paleobiology* 18: 425-446.
 - (16) Budd, A.F., T.A. Stemmann, and R.H. Stewart. 1992. Eocene Caribbean reef corals: a unique fauna from the Gatuncillo Formation of Panama. *Journal of Paleontology* 66: 570-594.
 - (15) Budd, A.F. and K.G. Johnson. 1991. Size-related evolutionary patterns among species and subgenera in the *Strombina* - group (Gastropoda: Columbidae). *Journal of Paleontology* 65: 417-434.
 - (14) Budd, A.F. 1990. Longterm patterns of morphological variation within and among species of reef-corals and their relationship to sexual reproduction. *Systematic Botany* 15: 150-165.
 - (13) Budd, A.F. 1989. Biogeography of Neogene Caribbean reef-corals and its implications for the ancestry of eastern Pacific reef-corals. *Memoirs of the Association of Australasian Palaeontologists* 8: 219-230.
 - (12) Budd, A.F., K.G. Johnson, and J.C. Edwards. 1989. Miocene coral assemblages in Anguilla, BWI, and their implications for the interpretation of vertical succession on fossil reefs. *Palaos* 4: 264-275.
 - (11) Budd, A.F. 1988. Large-scale evolutionary patterns in the reef coral *Montastraea*: the role of phenotypic plasticity. *Proceedings of the Sixth International Coral Reef Symposium* 3: 393-402.

- (10) Foster, A.B., K.G. Johnson, and L.L. Schultz. 1988. Allometric shape change and heterochrony in the free-living coral *Trachyphyllia bilobata* (Duncan). *Coral Reefs* 7: 37-44.
- (9) Foster, A.B. 1987. Neogene Paleontology in the Northern Dominican Republic. 4. The Genus *Stephanocoenia* (Anthozoa: Scleractinia: Astrocoeniidae). *Bulletins of American Paleontology* 93 (328): 5-22, pls. 1-7.
- (8) Foster, A.B. 1985. Variation within coral colonies and its importance for interpreting fossil species. *Journal of Paleontology* 59: 1359-1383.
- (7) Foster, A.B. 1984. The species concept in fossil hermatypic corals: a statistical approach. *Palaeontographica Americana* 54: 58-69.
- (6) Foster, A.B. 1983. The relationship between corallite morphology and colony shape in some massive reef-corals. *Coral Reefs* 2: 19-25.
- (5) Foster, A.B. 1980. Ecology and morphology of the Caribbean Mio-Pliocene reef coral *Siderastrea*. *Acta Palaeontologica Polonica* 25: 439-450.
- (4) Foster, A.B. 1980. Environmental variation in skeletal morphology within the Caribbean reef corals *Montastraea annularis* and *Siderastrea siderea*. *Bulletin of Marine Science* 30: 678-709.
- (3) Foster, A.B. 1979. Environmental variation in a fossil scleractinian coral. *Lethaia* 12: 245-262.
- (2) Foster, A.B. 1979. Phenotypic plasticity in the reef corals *Montastraea annularis* (Ellis and Solander) and *Siderastrea siderea* (Ellis and Solander). *Journal of Experimental Marine Biology and Ecology* 39: 25-54.
- (1) Foster, A.B. 1977. Patterns of small-scale variation of skeletal morphology within the scleractinian corals, *Montastrea annularis* and *Siderastrea siderea*. *Proceedings of the Third International Coral Reef Symposium* 2: 409-415.

b. Non-refereed (last five years)

Budd, A.F., K.G. Johnson, and J.S. Klaus. 1996-2017. Zooxanthellate Corals, in A.F. Budd (Coordinator), Neogene Marine Biota of Tropical America, a World-Wide Web Taxonomy Database, University of Iowa, Iowa City, IA, <http://nmita.geology.uiowa.edu>

3. Grants

a. External

- 2014 National Science Foundation Grant DBI-1349322 (2 yrs., 6/1/14-5/31/17, \$196,751); "CSBR: Natural History Collections: Critical renovation and revitalization of the University of Iowa Fossil Plant Collection" [PI= A.F. Budd; co-PI's= T.Adrain, J.Adrain, H.Sims]
- 2012 National Science Foundation Grant DEB-1145043 (2 yrs., 7/1/12-6/30/16, \$282,987); "Collaborative Proposal: ARTS: Revisionary systematics of fossil and living Caribbean faviid and mussid reef corals (Cnidaria, Anthozoa, Scleractinia)". [Lead PI = A.F. Budd]
- 2011 National Science Foundation Grant EAR-1126728 (3 yrs., 10/1/11-9/30/17, \$987,742) "MRI: Acquisition of an Electron Microprobe (EMP) for analysis of inorganic elemental concentrations in solid-state materials: Expanding science research and teaching in Iowa". [PI= I. Ukestins Peate; co-PI= J. Gilotti, A. Budd, M. Scherer, D. Peate]

- 2009 Encyclopedia of Life: Biodiversity Synthesis meeting, "Systematics and evolution of scleractinian corals", National Museum of Natural History, Smithsonian Institution, June 15-19, 2009, \$54,604 [PI= A.F. Budd; co-PI's= S.D. Cairns, N.Knowlton].
- 2006 National Science Foundation Grant DBI-0544235 (3 yrs., 4/15/06-4/14/10, \$298,027); "Computerization of the University of Iowa Paleontology Repository". [PI = A.F. Budd; co-PI's = J. Adrain, T. Adrain, C. Brochu]
- 2006 National Science Foundation Grant DEB-0543661 (3 yrs., 4/1/06-3/31/10, \$467,346; UI subcontract= \$85,261K); "A multidisciplinary approach to species boundaries in tropical reef corals ". [PI = D. Carlon (U. Hawaii); co-PI = A.F. Budd]
- 2004 National Science Foundation Grant EAR-0445789 (2 yrs., 5/01/05-4/30/07, \$102,421); "Collaborative Research: A Depositional and Paleoecological model of Neogene Reef Development in the Dominican Republic: Integrating Taxonomic and Chronostratigraphic Databases". (Lead PI = A.F. Budd)
- 2003 National Science Foundation Grant DEB-0343208 (3 yrs., 2/1/04-1/31/07, \$192,147); "Collaborative research: Biogeographic isolation and morphological convergence in scleractinian corals: morphological and molecular analyses of members of the suborder Faviina". (Lead PI = A.F. Budd)
- 2000 National Science Foundation Grant DBI-0096768 (2 yrs., 10/1/01-9/30/04, \$255,149 + \$26,355 University cost share); "Reorganization of the University of Iowa Paleontology Repository". (PI = A.F. Budd; co-PI's = J. Adrain, J. Golden)
- 2000 National Science Foundation Grant DEB-0102544 (2 yrs., 8/1/01-7/31/04, \$104,161); "NMITA (Phase II): Integrating interactive identification keys, distribution maps, and stratigraphic columns with the Neogene Marine Biota of Tropical America WWW Database". (PI = A.F. Budd; co-PI = C.T. Foster, Jr.)
- 1997 National Science Foundation Grant EAR97-25273 (3 yrs., 5/1/98-4/30/03, \$170,461); "Evolution of a species complex during faunal turnover: morphometric analyses of the *Montastraea annularis* reef coral complex". (PI= A.F. Budd)
- 1997 National Science Foundation Grant DEB-9705199 (3 yrs., 9/1/97-8/31/00, \$182,923 + \$41,190 University cost share); "Neogene Marine Biota of Tropical America (NMITA): A World-Wide Web Taxonomy Database". (PI = A.F. Budd; co-PI's = C.T. Foster, Jr., M.H. Fortunato Martins, J. Golden)
- 1992 National Science Foundation Grant EAR-9219138 (3 yrs., 5/1/93 - 4/30/96, \$192,999 + \$10,000 University cost share); "Plio-Pleistocene turnover in the Caribbean reef coral fauna and its relationship to regional environmental change". (PI = A.F. Budd)
- 1991 National Science Foundation Grant BSR-9122063 (1 yr., 7/1/92 - 12/31/93, \$2090 + \$2090 University cost share); "Publication of a monograph on two genera of Neogene Caribbean reef corals". (PI = A.F. Budd)
- 1991 Consultant to R.N. Ginsburg of the University of Miami (1 yr., \$4000) identifying fossil coral species in Bahamas core borings.
- 1990 Subcontract to D.C. Potts of the University of California at Santa Cruz (3 yrs., \$60232) on his National Science Foundation Grant BSR-9008225 with R.L. Garthwaite; "Systematics and evolutionary biology of the reef-coral *Porites* (Scleractinia)".
- 1989 Smithsonian NMNH Collections Improvement Fund Award (\$3270).
- 1987 National Geographic Society Grant 3586-87 (1 yr., \$12600 + \$1200 supplement); "The effects of deforestation on growth and mortality in reef-corals". (PI = A.B. Foster)

- 1986 National Science Foundation Grant BSR-8605277 (2 yrs., 10/15/86 - 9/30/89, \$80086 + \$24990 supplement); "Comparison of evolutionary patterns in Tertiary reef-corals (*Montastraea*, *Porites*) from the Caribbean and Mediterranean regions". (PI = A.B. Foster)
- 1986 National Science Foundation Grant BSR-8600974 (2 yrs., \$85000) to A.G. Coates, A.B. Foster, and V. Zlatarski; "Evolutionary patterns in Cretaceous reef corals and their relationship to biogeography"
- 1986 Smithsonian Short-term visitor Fellowship to cover expenses for a 3-week fieldtrip to Panama (\$1315).
- 1986 Research grant, Caribbean Coral Reef Ecosystems Program, Smithsonian Institution for research at the Carrie Bow Cay Marine Laboratory, Belize (\$1600).
- 1985 Two-week exchange visit to Yugoslavia in the National Academy of Science exchange program with Eastern Europe.
- 1983 National Science Foundation Grant BSR-8307109 (1 yr., \$47996) to study the systematics of Tertiary Mediterranean *Montastraea* and compare their evolutionary patterns with those observed in the Caribbean. (PI = A.B. Foster)
- 1981 National Science Foundation Grant DEB 80-21318 (2 yrs., \$51860) to study the phylogeny of the Caribbean reef-coral *Montastraea* quantitatively using fossil data. (PI = A.B. Foster)
- 1981 One month exchange visit to Bulgaria in the National Academy of Science exchange program with Eastern Europe.
- 1980 American Philosophical Society Grant (Grant no. 1539 Johnson Fund).
- 1979 Sigma Delta Epsilon, Graduate Women in Science Grant-in-aid.
- 1979, 83 Smithsonian Short-term Visitation Grant.

b. Internal

- 2013 Career Development Award
- 2011 Van Allen Natural Sciences Fellowship, "The origin and early evolution of Caribbean reef corals", \$15,000.
- 2010 UI Center for Global and Environmental Research (CGRER), "Sustaining the Biodiversity of Coral Reefs: Evolutionary Insight from Coral Skeletons", \$30,000
- 2010 International Programs (Geoscience Spring Fieldtrip), \$3100
- 2010 CLAS Curriculum Development Fund (Geoscience Spring Fieldtrip), \$1500
- 2008 Iowa Research Experiences for Undergraduates Award, \$2995 (Myra Laird)
- 2007 IP Stanley Faculty Travel Award, \$400 (St. Petersburg, Russia)
- 2007 Career Development Award (Washington, DC)
- 2004 Iowa Informatics Initiative Grant, \$30,141 (with C.T. Foster as co-PI)
- 2004 Iowa Research Experiences for Undergraduates Award, \$3000 (Troy Fadiga)
- 2003 International Travel Grant Proposal \$620, CLAS \$800 (Dominican Republic)
- 2003 CLAS Summer Fellowship
- 2002 Career Development Award (Washington, DC)
- 1999 MUCIA travel grant \$500 (Panama)
- 1997 Council on Teaching, Instructional Improvement Award, Cat I, \$4437 (with G. Klapper).
- 1996 MUCIA travel grant \$600 (UK)
- 1994 Carver Scientific Research Initiative Grant \$11984

- 1993 MUCIA travel grant \$500 (Italy)
- 1992 MUCIA travel grant \$1362 (Dominican Republic)
- 1992 Council on Teaching, Instructional Improvement Award, Cat II, \$980
- 1991 Semester assignment (Washington, DC)
- 1990/91 Interdisciplinary Research Assistantship Award \$9500
- 1988 Old Gold Summer Fellowship, University of Iowa (\$3500 + 1800 MUCIA travel grant).
- 1986 Old Gold Summer Fellowship, University of Iowa (\$3000).

4. Invited Lectures and Conference Presentations (*=speaker, presentations are oral unless noted otherwise)

a. Non-refereed Abstracts and Conference Presentations

• International

- (34) Prada, C.; Hanna, B.; Budd, A. B.; Woodley, C.; Schmutz, J.; Grimwood, J.; Iglesias-Prieto, R.; Kitano, H.; Levitan, D.; Knowlton, N.; DeGiorgio, M.; Medina, M., 2016; EMPTY NICHES AFTER EXTINCTIONS INCREASE POPULATION SIZES OF MODERN CORALS. 13th International Coral Reef Symposium (Honolulu, Hawaii), Abstracts (Abstract ID: 28334).
- (33) Arrigoni, R.; Benzoni, F.; Stolarski, J.; Hoeksema, B. W.; Payri, C.; Terraneo, T. I.; Huang, D.; Budd, A. F.; Berumen, M. L., 2016; PHYLOGENY AND EVOLUTION OF THE CORAL FAMILY LOBOPHYLLIIDAE. 13th International Coral Reef Symposium (Honolulu, Hawaii), Abstracts (Abstract ID: 28618).
- (32) Fogarty, N. D.; Hightshoe, M. V.; Bock, M. E.; Budd, A. F.; Baums, I. B.; EXTENSIVE PHENOTYPIC VARIATION IN CARIBBEAN ACROPORID HYBRIDS IS LIKELY A MECHANISM FOR ADAPTATION TO CHANGING ENVIRONMENTS, 2016. 13th International Coral Reef Symposium (Honolulu, Hawaii), Abstracts (Abstract ID: 29469).
- (31) Budd, A.F., and F.R. Bosellini, 2015. The diversification of Mediterranean brain corals and its relationship to biogeography. 12th International Symposium on Fossil Cnidaria, Muscat, Oman.
- (30) Huang, D., E.R. Lovell, A.F. Budd, 2012. Evolution of coral macromorphology, microstructure and micromorphology in the 'Bigmessidae'. 12th International Coral Reef Symposium. Cairns, Queensland, Australia. Book of Abstracts, p.47.
- (29) Klaus, J., K. Johnson, D.McNeill, A.F. Budd, 2012. Free-living corals of the pan-tropical Cenozoic. 12th International Coral Reef Symposium. Cairns, Queensland, Australia. Book of Abstracts, p.21.
- (28) *Budd, A.F., and N.D. Smith, 2011. Morphological phylogenetics of faviid and mussid corals. *Kölner Forum Geol. Paläont.* 19: 23-24.
- (27) Johnson, K.G., J. Stolarski, S.D. Cairns, and A.F.Budd, 2009. Coralloosphere.org: Biodiversity informatics for extinct and extant scleractinian corals. Ninth North American Paleontol. Conv. Abstracts, Cincinnati Museum Center Scientific Contributions, Number 3, p.97. (poster)
- (26) *Budd, A.F. and J. M. Pandolfi 2009. Hybridization, speciation, and extinction at the geographic margin of a reef coral species complex. Ninth North American Paleontol.

- Conv. Abstracts, Cincinnati Museum Center Scientific Contributions, Number 3, p.269. (invited)
- (25) *Budd, A.F., and J. Stolarski, 2008. Reconciling morphologic and molecular data: Corallite wall and microstructures of radial elements in the scleractinian coral family Faviidae. 11th International Coral Reef Symposium (Fort Lauderdale, Florida), Abstracts, p.250.
 - (24) McNeill, D., J. Klaus, and A. Budd, 2008. Caribbean Coral Reef Types from a mixed siliciclastic-carbonate setting: Miocene-Pliocene of the Dominican Republic. 11th International Coral Reef Symposium (Fort Lauderdale, Florida), Abstracts, p. 6.
 - (23) Klaus, J., A. Budd, D. McNeill, and S. Ishman, 2008. Paleocology of Mio-Pliocene Free-Living Corals in the northern Dominican Republic and Neogene evolutionary patterns of the Caribbean region. 11th International Coral Reef Symposium (Fort Lauderdale, Florida), Abstracts, p. 7.
 - (22) Knowlton, N., H. Fukami, A. Chen, and A. Budd, 2008. Mitochondrial And Nuclear Genes Suggest That Stony Corals Are Monophyletic But Most Families Of Stony Corals Are Not. 11th International Coral Reef Symposium (Fort Lauderdale, Florida), Abstracts, p. 251.
 - (21) Johnson, K., J. Stolarski, S. Cairns, and A. Budd, 2008. The Corallosphere: A Web-Based Collaboration Tool For The Taxonomy And Systematics Of Scleractinian Corals. 11th International Coral Reef Symposium (Fort Lauderdale, Florida), Abstracts, p.564.
 - (20) *Budd, A.F., and J. Stolarski, 2007. Reconciling molecular and morphologic data within the family Mussidae. X International Symposium on Fossil Cnidaria and Porifera, St. Petersburg, Russia, Abstracts, p.27 (invited).
 - (19) *Budd, A.F., 2007. Tracing the long-term evolution of a species complex and its relationship to environmental change: Examples from the *Montastraea* "annularis" complex. X International Symposium on Fossil Cnidaria and Porifera, St. Petersburg, Russia, Abstracts, p.26 (invited).
 - (18) *Budd, A.F., 2006. Micromorphology and microstructure in scleractinian corals: New sources of phylogenetically informative morphologic characters. Asia Pacific Coral Reef Symposium (June 14-24, 2006, The Chinese University of Hong Kong), Programme, Abstracts and Directories, p. O-54 (invited).
 - (17) *Budd, A.F., 2004. Reassessment of morphologic characters used in phylogeny reconstruction and classification within the Suborder Faviina (Anthozoa: Scleractinia). 10th International Coral Reef Symposium (Okinawa, Japan), Abstracts, p.140 (invited).
 - (16) Knowlton, N, H. Fukami, A.F. Budd, and D.R. Levitan, 2004. Geographic differences in species boundaries among members of the *Montastraea annularis* complex based on molecular and morphological marker. 10th International Coral Reef Symposium (Okinawa, Japan), Abstracts, p.184 (invited).
 - (15) Carlon, D.B. and A.F. Budd, 2004. Ecological speciation in the coral genus *Favia*. 10th International Coral Reef Symposium (Okinawa, Japan), Abstracts, p.184 (invited).
 - (14) Klaus, J.S., A.F. Budd, and D.F. McNeill, 2004. Miocene to Pliocene reef coral assemblages in the northern Dominican Republic. 10th International Coral Reef Symposium (Okinawa, Japan), Abstracts, p.259 (poster).
 - (13) *Budd, A.F. and J.M. Pandolfi, 2003. Hybridization and its impact on the evolution of scleractinian species: An example from the Pleistocene of the Bahamas. *Berichte des*

- Institutes für Geologie und Paläontologie der Karl-Franzens-Universität Graz/Austria, vol. 7, p.19 (invited).
- (12) *Budd, A.F. and J.M. Pandolfi, 2003. Pleistocene hybridization and lineage fusion, and their effect on modern reef coral species. 7th International Conference on Coelenterate Biology, Abstracts, p. 42 (invited).
 - (11) Holcomb, M., J.M. Pandolfi, I.G. Macintyre, and A.F. Budd, 2003. Use of X-radiographs to identify members of the *Montastraea* “*annularis*” reef coral species complex. 7th International Conference on Coelenterate Biology, Abstracts, p. 42. (poster)
 - (10) *Budd, A.F. and J.B.C. Jackson. 1996. Coral Reef Community Dynamics over 8 million years of evolutionary time: episodes of stasis and turnover. 8th International Coral Reef Symposium (Panama City, Panama), Abstracts, p.29 (invited).
 - (9) *Budd, A.F., H. Fortunato, C.T. Foster, Jr., and R.A. Petersen. 1996. Neogene Marine Fossils of Tropical America: A World-Wide Web Taxonomy Database. 8th International Coral Reef Symposium (Panama City, Panama), Abstracts, p.28.
 - (8) *Budd, A.F., F.R. Bosellini, and T.A. Stemmann. 1995. Quantitative recognition of species of *Tarbellastraea* in the Oligocene to Miocene of the northern Mediterranean region and their evolutionary patterns. VII International Symposium on Fossil Cnidaria and Porifera, Madrid, Abstracts, p. 13.
 - (7) Bosellini, F. and A.F. Budd. 1994. Evolutionary patterns in the common Miocene Mediterranean reef-building coral *Tarbellastraea*. Interim Colloquium of the Regional Committee of Mediterranean Neogene Stratigraphy, Marseille, p.8.
 - (6) *Budd, A.F. 1991. Patterns of morphologic variation within and among species of the reef coral *Montastraea*. Sixth Int. Symp. Fossil Cnidarians, Münster, Germany (invited).
 - (5) *Budd, A.F., D.C. Potts, and R. Garthwaite. 1991. Biological and geological approaches to speciation: Caribbean Poritids. Sixth Int. Symp. Fossil Cnidarians, Münster, Germany (invited).
 - (4) *Foster, A.B. 1988. Large-scale evolutionary patterns in the reef-coral *Montastraea*: the role of phenotypic plasticity. Sixth Int. Coral Reef Symp., Townsville, Australia, Abstracts, p. 13.
 - (3) *Foster, A.B. 1988. Neogene coral biogeography in the Caribbean and eastern Pacific. Fifth Int. Symp. Fossil Cnidarians, Brisbane, Australia, Abstracts, p. 38 (invited).
 - (2) *Foster, A.B. 1983. The species concept in fossil hermatypic corals: a statistical approach. Fourth Int. Symp. Fossil Cnidaria, Washington, D.C (invited).
 - (1) *Foster, A.B. 1979. Pliocene reef corals from the north end of the Gulf of California. Third Int. Symp. Fossil Cnidarians (Wydawnictwa Geologiczne, Warszawa) p. 27-28.

- **National**

- (68) *Budd, A.F. and T.A. Stemmann, 2015. REVISITING THE GATUNCILLO FORMATION: EOCENE BRAIN CORALS AND THE ORIGIN OF THE RECENT CARIBBEAN CLADE MUSSIDAE. Geological Society of America Abstracts with Programs, Annual Meeting, vol. 47, no.7, p.424.
- (67) Adrain, T.S., J.M. Adrain, H.J. Sims, A.F. Budd, A.E. Wilkins, P.D. Puglisi, H.K. Becker, and H.D. Hanna, 2015. ENGAGING UNDERGRADUATE STUDENTS IN

- COLLECTION-BASED RESEARCH AT THE UNIVERSITY OF IOWA
PALEONTOLOGY REPOSITORY. Geological Society of America Abstracts with
Programs, Annual Meeting, vol. 47, no.7, p.554.
- (66) B. Khameiss, W.H. Hoyt, S.K. El Ebaidi, J.S. Kalus and A.F. Budd, 2015. A
PRELIMINARY DOCUMENTATION OF THE CORAL REEFS FROM LIBYA.
Geological Society of America Abstracts with Programs, Annual Meeting, vol. 47, no.7,
p.634.
 - (65) Radicot, R., A.F. Budd, D. Huang, N.D. Smith, 2015. MORPHOLOGICAL DATA
PARTITIONS POSSESS DIFFERENT LEVELS OF PHYLOGENETIC SIGNAL FOR
THE EVOLUTIONARY RELATIONSHIPS OF THE REEF CORAL FAMILIES
MERULINIDAE, MONTASTRAEIDAE, DIPLOASTRAEIDAE, AND MUSSIDAE
(CNIDARIA: ANTHOZOA: SCLERACTINIA). Geological Society of America
Abstracts with Programs, Annual Meeting, vol. 47, no.7, p.422.
 - (64) Carlon, D.B. and A.F. Budd, 2015. IS THE TROPICAL ATLANTIC AN
EVOLUTIONARY HOTSPOT FOR CORAL EVOLUTION? TIMING AND
DIVERSIFICATION OF THE CORAL SUBFAMILIES MUSSINAE AND FAVIINAE
IN THE TROPICAL ATLANTIC. Geological Society of America Abstracts with
Programs, Annual Meeting, vol. 47, no.7, p.424.
 - (63) Bosellini, F.R., A.F. Budd, and K.G. Johnson, 2015. MEDITERRANEAN VS
CARIBBEAN OLIGOCENE REEF CORALS: A NEW PALEOBIOGEOGRAPHIC
SCENARIO UNRAVELED BY PROGRESS IN CORAL SYSTEMATICS. Geological
Society of America Abstracts with Programs, Annual Meeting, vol. 47, no.7, p.489.
 - (62) Cordie, D.R. and A.F. Budd, 2015. HISTOLOGICAL DATA IN A COMBINED
PHYLOGENETIC ANALYSIS OF SCLERACTINIAN REEF CORALS. Geological
Society of America Abstracts with Programs, Annual Meeting, vol. 47, no.7, p.422.
 - (61) *Budd, A.F., F.R. Bosellini, and N.D. Smith, 2014. Diversification of Cenozoic reef
corals and its relationship to closure of the Tethys, North American Paleontological
Convention, Paleontological Society Special Publication 13: 22.
 - (60) Huang, D., N.D. Smith, A.F. Budd, 2013. From 'Bigmessidae' to Merulinidae: integrating
molecules and morphology to resolve the systematics of scleractinian corals. Evolution
2013. Snowbird, Utah.
 - (59) Klaus, J.S., D.F. McNeill, and A.F. Budd, 2012. Neogene reef corals assemblages of the
Bocas del Toro Region, Panama. Geological Society of America Abstracts with
Programs, Annual Meeting, vol. 43, no.5.
 - (58) *Budd, A.F., F.R. Bosellini, and N.D. Smith, 2012. Patterns of divergence between
Caribbean and Indo-Pacific reef corals. Geological Society of America Abstracts with
Programs, Annual Meeting, vol. 43, no.5 (invited).
 - (57) Casebolt, S. and A.F. Budd, 2011. A quantitative approach to assessing coral septal
dentition. Geological Society of America Abstracts with Programs, Annual Meeting, vol.
42, no.5, p. 612 (poster)
 - (56) Tibbits, M. and A.F. Budd, 2011. Variation in light intensity causes plastic change in
hermatypic coral micromorphology. Geological Society of America Abstracts with
Programs, Annual Meeting, vol. 42, no.5, p. 612-613 (poster)

- (55) *Budd, A.F. and J.M. Pandolfi, 2011. Contrasting patterns of speciation in reef corals and their relationship to population connectivity. Geological Society of America Abstracts with Programs, Annual Meeting, vol. 42, no.5, p. 208 (invited)
- (54) *Budd, A.F., 2010. Rethinking the phylogeny of scleractinian reef corals: reconciling morphologic and molecular data in the families Faviidae and Mussidae. Symposium S1: Assembling the Cnidarian Tree of Life, Society for Integrative and Comparative Biology, SICB 2010 Annual Meeting Abstracts, p. 19. (invited)
- (53) Klaus, J.S., D.F. McNeill, and A.F. Budd, 2009. Coral faunal partitioning and reef development within a mixed carbonate-siliciclastic sequence stratigraphic context. Geological Society of America Abstracts with Programs, Annual Meeting, vol.41, no. 7, p. 105. (poster)
- (52) Laird, M. F. and A.F. Budd, 2009. Morphometric analysis of the *Montastraea cavernosa* complex in the Miocene to Recent of the Western Caribbean. Geological Society of America Abstracts with Programs, North-Central Section. (poster)
- (51) *Budd, A.F. 2006. The origin and divergence of modern Caribbean reef coral genera. Geological Society of America Abstracts with Programs, Annual Meeting, vol.38, no. 7, p. 534. (invited)
- (50) Adrain, T., A. Budd, J. Adrain, C. Brochu, and H. Sims, 2006. Unlocking research collections: The UI Paleontology Repository Computerization Project. Geological Society of America Abstracts with Programs, Annual Meeting vol.38, no. 7, p. 141-142. (poster)
- (49) Fadiga, T.R. and A.F. Budd, 2006b. Morphological phylogeny of the reef coral family Meandrinidae (Anthozoa, Scleractinia). Geological Society of America Abstracts with Programs, vol.38, no. 7, p. 557 (poster).
- (48) Fadiga, T.R. and A.F. Budd, 2006a. A Meandrina morphologic phylogeny. Geological Society of America Abstracts with Programs, Vol. 38, No. 4, p. 74 (poster).
- (47) Schultz, H.A. and A.F. Budd, 2005. Neogene evolution of the reef coral species complex *Montastraea "cavernosa"*: Morphometric analysis of variation within and among species. Geological Society of America Abstracts with Programs, vol.37, no. 7, p. 135. (poster)
- (46) Beck, B.R. and A.F. Budd, 2005. Morphometric analysis of the evolutionary patterns of *Siderastrea* during the Mio-Pliocene of the Dominican Republic. Geological Society of America Abstracts with Programs, vol.37, no. 7, p. 135. (poster)
- (45) Adrain, T.S., A.F. Budd, J.M. Adrain, and J. Golden, 2005. UI Paleontology Repository Reorganization Project: Improving Standards in Collection Care and Access. Geological Society of America Abstracts with Programs, vol.37, no. 7, p. 284. (poster)
- (44) *Budd, A.F., T.S. Adrain, and S. Prathivadi, 2005. Taxonomic dictionary for the Neogene Marine Biota of Tropical America (NMITA) Database. No. Amer. Paleontol. Conv. 2005, PaleoBios 25(2):24 (invited).
- (43) *Budd, A.F. and N.D. Smith, 2005. Morphologic phylogenetics using continuous characters: An example based on a species complex of reef corals. No. Amer. Paleontol. Conv. 2005, PaleoBios 25(2):24-25.
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- (38) *Budd, A.F. 2004. Morphologic disparity during the early evolution of a common Caribbean reef coral. Geological Society of America Abstracts with Programs, North Central Section, vol. 35, no. 2, p.51.
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- (36) *Budd, A.F., D.G. Fautin, R.W. Buddemeier, and C.T. Foster Jr. 2002. Interoperability of databases for fossil and living organisms – Corals as a prototype system. Geological Society of America Abstracts with Programs, vol. 34, no. 6, p. 358-359.
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- (33) *Budd, A. F., C.T. Foster Jr., J.P. Dawson, and K.G. Johnson. 2000. Documenting faunal turnover of Caribbean coral reefs: The Neogene Marine Biota of Tropical America (NMITA) Database. Geol. Soc. Amer. Abs. Prog. 32(7):A131 (invited).
- (32) Miller, D. J. and A. F. Budd. 2000. The role of development in primary homology assessment: New perspectives from organisms with accretionary growth. Geol. Soc. Amer. Abs. Prog. 32(7):A445.
- (31) Baeder-Helmke, V. A. and A.F. Budd. 1999. Coral reef extinction and community change across the Oligocene-Miocene boundary in Puerto Rico. Geol. Soc. Amer. Abs. Prog. 31(7): A466.
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- (22) Petersen, R.A. and A.F. Budd. 1996. Patterns of community change in Neogene and Quaternary Coral Reefs in Curacao, Netherland Antilles. Geol. Soc. Amer. Abs. Prog. 28(6): 60 (invited).
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- (18) *Budd, A.F., K.G. Johnson, and T.A. Stemmann. 1993. Faunal turnover in Neogene to Recent Caribbean reef corals and regional environmental change. Geol. Soc. Amer. Abs. with Prog. 25(3): 9-10 (invited).
- (17) González, L.A., H.M. Ruiz, A.F. Budd, and V. Monnell. 1992. A late Miocene barrier reef in Isla de Mona, Puerto Rico. Geol. Soc. Amer. Abs. with Prog. 24(7): A350.
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- (15) *Budd, A.F., T.A. Stemmann, and K.G. Johnson. 1992. Late Cenozoic turnover in the Caribbean reef coral fauna. Fifth North American Paleontological Conventions, Abstracts and Program. Paleontological Society Spec. Publ. 6, p. 43 (invited).
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- (13) *Budd, A.F. 1990. The role of historical factors in generating large-scale evolutionary trends in a common reef-coral. Geol. Soc. Amer. Abs. with Prog. 22(7):A267.
- (12) *Budd, A.F. and A.G. Coates. 1989. Clade shape in the reef-coral *Montastraea* during the Cretaceous. Geol. Soc. Amer. Abs. with Prog. 21(6): A288.
- (11) *Budd, A.F. 1988. Morphologic variation within and among species of reef-corals and its relationship to evolutionary pattern. American Society of Zoologists, San Francisco.

- (10) *Foster, A.B. and K.G. Johnson. 1988. Coral distribution patterns in Miocene Reefs of Anguilla, Open Leeward Islands, West Indies. American Association of Petroleum Geologists, Annual Convention, Houston, TX.
- (9) *Foster, A.B. 1987. Pliocene reef-corals north of the Gulf of California and their biogeography. Geol. Soc. Amer. Abs. with Prog. 19(7): 666-667 (invited).
- (8) *Foster, A.B. and T.A. Stemmann. 1987. Contrasting evolutionary patterns in Neogene Mediterranean and Caribbean reef-corals: a consequence of biogeography. Geol. Soc. Amer. Abs. with Prog. 19(7): 666.
- (7) *Foster, A.B. 1985. Contrasting evolutionary patterns in two reef-corals and their possible relationship to life history traits. Geol. Soc. Amer. Abs. with Prog. 17(7): 585.
- (6) *Foster, A.B. 1983. Evolutionary patterns in a common reef-coral and their relationship to phenotypic plasticity. Geol. Soc. Amer. Abs. with Prog. 15(6): 575.
- (5) *Foster, A.B. 1982. Species overlap in reef-corals and its evolutionary significance. Geol. Soc. Amer. Abs. with Prog. 14(7): 491 (invited).
- (4) *Foster, A.B. 1982. Branching within some typically massive species of scleractinian coral. Geol. Soc. Am. Abs. with Prog. 14(1): 18.
- (3) *Foster, A.B. 1981. Intracolony variation as a predictor of intraspecific variation in non-polymorphic colonial animals. Geol. Soc. Amer. Abs. with Prog. 13(7): 454.
- (2) *Foster, A.B. 1978. Phenotypic plasticity in modern reef coral species and its importance to the taxonomy of modern and ancient scleractinians. Geol. Soc. Am. Abs. with Prog. 10(7): 403.
- (1) *Foster, A.B. 1976. Intraspecific morphologic variation in scleractinian corals: a key to life habit interpretation. Geol. Soc. Am. Abs. with Prog. 8(6): 872-873.

b. Invited lectures at other UI Dept Colloquia and other institutions (2006-2017)

July 2016	Paleontological Research Institute, Summer Colloquium Seminar: “Rethinking the phylogeny of scleractinian corals: Integrating morphological, molecular, and fossil data”
February 2015	Department of Biology Seminar, Pennsylvanian State University, “Rethinking the evolution of scleractinian corals: reconciling morphological, molecular, and fossil data”
December 2013	Comparative Biology Seminar Series, American Museum of Natural History, NYC, “Rethinking the evolution of scleractinian corals: reconciling morphological, molecular, and fossil data”
November 2010	Iowa Museum of Natural History Explorers Lecture “Sustaining the biodiversity of coral reefs: why evolution matters”
September 2010	Iowa State University, Ames IA “Evolutionary patterns in reef corals and their implications for marine conservation”
June 2009	EOL workshop, Smithsonian Institution, Washington, DC “Macromorphology; micromorphology; and microstructure using faviids and mussids as examples “
February 2009	Darwin Day Symposium, Department of Biology, University of Iowa “Rethinking the evolution of reef corals (Anthozoa: Scleractinia): reconciling morphologic and molecular data”

June 2008	Natural History Museum, London, UK “Rethinking the phylogeny of reef corals (Anthozoa: Scleractinia): reconciling morphologic and molecular data”
January 2007	Committee on Evolutionary Biology, University of Chicago. “Rethinking the phylogeny of reef corals (Anthozoa: Scleractinia): reconciling morphologic and molecular data”
August 2006	School of Physical Sciences - Earth Sciences, University of Queensland, Brisbane, Australia, “Evolution and extinction in reef corals: Insight from the fossil record”

TEACHING AT THE UNIVERSITY OF IOWA

1. Teaching Assignments (2010-2015)

Semester and Year	Course Numbers and Titles () indicates proportion of semester that team course was taught by xxx Indicates team taught course where xxx participated in 100% of course	Sem. Hrs.	Enrollment	# Grad. Advisees	# Under-grad Advisees
Spring 2015	EES1040 Evolution and History of Life (50%)	4/3	59/25	3	~5 Geo/ES Honors
	EES:1061 Origins of Life in the Universe -Part 2 (33%)	4	50		
Fall 2014	EES:3070 Marine Ecosystems and Conservation	3	33	3	~5 Geo/ES Honors
	EES:4450 Morphometrics	1-3	8		
Spring 2013	12:004 Evolution and History of Life (50%)	4/3	63/36	4	~15 Geo/ES Honors
	12:046 Origins of Life in the Universe - Part 2 (33%)	4	45		
Fall 2013	Career Development Award			4	
Spring 2013	12:004 Evolution and History of Life (50%)	4/3	62/21	3	~15 Geo/ES Honors
	12:225 Paleontology Seminar (50%)	1-3	8		
Fall 2012	12:107 Marine Ecosystems and Conservation	3	42	3	~15 Geo/ES Honors
	12:145 Morphometrics	1-3	13		
Spring 2012	12:004 Evolution and History of Life (50%)	4/3	86/26	3	~15 Geo/ES Honors
	12:225 Paleontology Seminar (50%)	1-3	9		
Fall 2011	12:107 Marine Ecosystems and Conservation	3	46	3	~15 Geo/ES Honors
Spring 2011	12:004 Evolution and History of Life (50%)	4/3	103/44	6	~12 Geo/ES Honors
	12:225 Paleontology Seminar (50%)	1-3	9		
Fall 2010	12:107 Marine Ecosystems and Conservation	3	52	7	~12 Geo/ES

	12:145 Morphometrics	1-3	14		Honors
Spring 2010	12:004 Evolution and History of Life	4/3	105/60	8	1 Geo Honors
	12:116 Spring Field Trip	2	17		

2. STUDENTS SUPERVISED

a. Ph.D. Candidates

Name	Years	Outcome	Comments
<i>M. Tibbits</i>	2009-2016	<i>Ph.D. 2016</i>	
<i>A. Grass</i>	2009-2014	<i>Ph.D. 2014</i>	
<i>J. Jung</i>	2007-2016	<i>Resigned</i>	
<i>D. Shapo Jannusch</i>	2003-2008	<i>Ph.D. 2008</i>	
<i>A. Lopez-Perez</i>	2001-2005	<i>Ph.D. 2005</i>	<i>Asst. Professor, Universidad del Mar, Puerto Angel, Oaxaca, Mexico</i>
<i>J.P. Dawson</i>	1997-2004	<i>Ph.D. 2004</i>	<i>Instructor, Kirkwood Community College</i>
<i>S. Wallace (co-advisor)</i>	1997-2001	<i>Ph.D. 2001</i>	<i>Assoc. Professor, Eastern Tennessee State University</i>
<i>K. Ketcher</i>	1993-1996	<i>Resigned</i>	
<i>T.A. Stemmann</i>	1985-1991	<i>Ph.D. 1991</i>	<i>Lecturer, University of the West Indies, Jamaica</i>
<i>K.G. Johnson</i>	1985-1991	<i>Ph.D. 1991</i>	<i>Research Scientist, The Natural History Museum, London, U.K.</i>

b. M.S. Candidates

Name	Years	Outcome	Comments
<i>D. Cordie</i>	2013-2015	<i>M.S. 2015</i>	<i>Ph.D. candidate at University of Wisconsin Milwaukee</i>
<i>S. Casebolt</i>	2009-2011	<i>M.S. 2011</i>	<i>Ph.D. candidate at University of Florida</i>
<i>T. Champagne</i>	2007-2011	<i>M.S. 2011</i>	
<i>K. Rhodes</i>	2008-2010	<i>M.S. 2010</i>	<i>Ph.D. candidate at the University of Michigan</i>
<i>M. Tibbits</i>	2007-2009	<i>M.S. 2009</i>	
<i>A. Grass</i>	2007-2009	<i>M.S. 2009</i>	
<i>R. Bykowski</i>	2007-2009	<i>M.S. 2009</i>	<i>Ph.D. candidate at Indiana University</i>
<i>T. Fadiga</i>	2006-2011	<i>M.S. 2011</i>	<i>Ph.D. candidate at the University of Tennessee</i>
<i>J. Cassara</i>	2006-2010	<i>M.S. 2010</i>	
<i>H. Schultz</i>	2003-2005	<i>M.S. 2005</i>	<i>Ph.D. candidate at the University of California at Davis</i>
<i>B. Beck</i>	2002-2005	<i>M.S. 2005</i>	<i>Coral Reef Ecologist, Khaled bin Sultan Living Oceans Foundation</i>
<i>J. Toennies</i>	2001-2003	<i>M.S. 2003</i>	
<i>D. Shapo Jannusch</i>	2001-2003	<i>M.S. 2003</i>	
<i>J. Klaus</i>	1999-2001	<i>M.S. 2001</i>	<i>Associate Professor at the University of Miami</i>
<i>J. Chidsey</i>	1996-1998	<i>Resigned</i>	
<i>V. Baeder-Helmke</i>	1997-2000	<i>M.S. 2000</i>	
<i>R.A. Petersen</i>	1994-1996	<i>M.S. 1996</i>	
<i>J.L. Swedberg</i>	1992-1994	<i>M.S. 1994</i>	
<i>E. Sadorf</i>	1991-1994	<i>M.S. 1994</i>	

c. Undergraduate Honors Theses / Senior Projects

Name	Years	Outcome	Comments
<i>J.D. Woodell</i>	2013-	<i>In progress</i>	
<i>C. Kuempel</i>	2009-2010	<i>B.S. 2011</i>	
<i>M. Laird</i>	2008-2010	<i>B.A. 2010</i>	
<i>T. Fadiga</i>	2003-2006	<i>B.S. 2006</i>	
<i>J. Davis</i>	2002-2003	<i>B.S. 2004</i>	

<i>E. Kerns</i>	2002-2003	B.S. 2003	
<i>J. Klaus</i>	1998-1999	B.S. 1999	<i>Asst. Professor, University of Miami</i>
<i>B. Tompkins</i>	1992-1994	B.S. 1994	
<i>C.A. Brochu</i>	1987-1989	B.S. 1989	<i>Assoc. Professor, University of Iowa</i>

d. Post Docs/ visiting students from other institutions

Name	dates	Institution	project
<i>D. Huang</i>	2012-2014	University of Iowa	NSF DEB-1145043
<i>J.S. Klaus</i>	2005-2007	University of Miami	NSF EAR-0445789

3. Other Thesis/Comprehensive Committee Membership (last ten years)

Name	Outcome	Comments
<i>K. Janiszewska</i>	<i>Ph.D. 2014, Polish Academy of Sciences</i>	
<i>N. Santodomingo</i>	<i>Ph.D. 2014, Utrecht University</i>	
<i>B.R. Rupe</i>	<i>M.S. 2013</i>	<i>International Programs</i>
<i>H. Zou</i>	<i>M.S. 2013</i>	
<i>M. Dreihobl</i>	<i>M.S. 2013</i>	
<i>N. Buenger McAdams</i>	<i>M.S. 2010, Ph.D. in progress</i>	
<i>K. Bromfield</i>	<i>Ph.D. 2010, University of Queensland</i>	
<i>J. Miller-Camp</i>	<i>M.S. 2010, Ph.D. 2016</i>	
<i>M. Spencer</i>	<i>Comps 2009, Ph.D. 2013</i>	
<i>E. Allen</i>	<i>M.S. 2012</i>	
<i>E. Wilberg</i>	<i>Comps 2008, Ph.D. 2012</i>	
<i>S. Drumheller</i>	<i>Comps 2007, Ph.D. 2012</i>	
<i>T. Hegna</i>	<i>M.S. 2006</i>	
<i>D. Snyder</i>	<i>Ph.D. 2006</i>	
<i>C. Monson</i>	<i>M.S. 2009</i>	
<i>T. Karim</i>	<i>Comps 2005, Ph.D. 2008</i>	
<i>T-W. Ng</i>	<i>Comps 2004, Ph.D. 2009</i>	
<i>C. Stewart</i>	<i>M.S. 2003</i>	
<i>T. Adrain</i>	<i>M.S. 2003</i>	
<i>J. Bean</i>	<i>M.S. 2002</i>	
<i>D. Schultz</i>	<i>M.S. 2002</i>	
<i>J. Gian</i>	<i>Comps 2001</i>	
<i>F. Williams</i>	<i>Comps 2000</i>	<i>Biological Sciences</i>
<i>R. Benton</i>	<i>Ph.D. 1999</i>	

4. Other Contributions to Instructional programs (last ten years)

REU supplements to NSF grants:

2014 REU supplement (\$6242), National Science Foundation Grant DEB-0543661, students= J.D. Woodell (2014-2015)

2013 REU supplement (\$6242), National Science Foundation Grant DEB-0543661, students= J.D. Woodell (2013-2014)

2009 REU supplement (\$5435), National Science Foundation Grant DEB-0543661, students= Caitlin Kuempel (2009)

2005 REU supplement (\$6000), National Science Foundation Grant DEB-0343208; students= Troy Fadiga (2005-2006)
 2002 REU supplement (\$6000), National Science Foundation Grant DBI-0096768; students= Lindsey James (2002-2003).
 2002 REU supplement (\$6000), National Science Foundation Grant DEB-0102544 students= Ethan Kerns (2002-2003), Cristin Payne (2003).
 2000 REU supplement (\$6000), National Science Foundation Grant DEB-9705199; students= Tom Warning (2000-2001)
 2000 REU supplement (\$6000), National Science Foundation Grant EAR97-25273; students= Erika Twedt (2000), Andy Stephenson (2000-2001)
 1998 REU supplement (\$6000), National Science Foundation Grant DEB-9705199; students= Steve Jones (1998-2000), Matt Burreson (1998-1999)
 1997 REU supplement (\$6000), National Science Foundation Grant EAR97-25273; students= Jim Klaus (1998-1999)

2011-2012 ICRU (\$2500), student= Kevin Cutsforth
 2008-2009 IREU (\$2995), student= Myra Laird
 2003-2004 IREU (\$3000), student= Troy Fadiga

SERVICE

1. Department (2006-2015)

2013-2014. ES/EES Honors Advisor. *Chair of:* Repository Committee, Petrographic Facilities Committee; Mentoring Committee for B. Cramer; 5-yr Review committee for Y. Zhang. *Member of:* Graduate Committee.

2012-2013. ES/Geoscience Honors Advisor. *Chair of:* Repository Committee, Petrographic Facilities Committee; P&T Committee for H. Sims. *Member of:* Graduate Committee.

2010-2012. ES/Geoscience Honors Advisor. *Chair of:* Repository Committee, Petrographic Facilities Committee; Mentoring Committee for H. Sims. *Member of:* Sedimentary Geology Search Committee.

2010-2011. ES/Geoscience Honors Advisor, Graduate Committee. *Chair of:* Repository Committee, Petrographic Facilities Committee; P&T Committee for J. Adrain; Mentoring Committee for H. Sims.

2009-2010. Geoscience Honors Advisor, Graduate Committee. *Chair of:* Repository Committee, Petrographic Facilities Committee; Mentoring Committee for H. Sims.

2008-2009. Geoscience Honors Advisor, Graduate Committee. *Chair of:* Repository Committee, Petrographic Facilities Committee, Sedimentary Geology Search Committee (cancelled); *Member of:* ES Advisory Committee, Mentoring Committee for H. Sims.

2007-2008. ES Academic Coordinator (spring 2008), ES General Advisor, Geoscience Honors Advisor, Graduate Committee. *Chair of:* Repository Committee; *Member of:* ES Advisory Committee, Mentoring Committee for H. Sims.

- 2006-2007. ES General Advisor, Geoscience Honors Advisor, Faculty Meeting Scribe. *Chair of:* Repository Committee, P&T Committee for M. Reagan, Mentoring Committee for H. Sims; *Member of:* ES Advisory Committee.
- 2005-2006. ES General Advisor, Geoscience Honors Advisor. *Chair of:* Repository Committee, Mentoring Committee for H. Sims; *Member of:* Department Executive Committee, ES Advisory Committee, P&T Committee for Y.K. Zhang.

2. University (2006-2015)

- 2012-2013 Pentacrest Museums Task Force
- 2011-2014 Faculty Senate
- 2010-2013 Sustainability Curriculum Advisory Committee
- 2010 CMRF Review Committee
- 2009, 2010 Graduate College, Jakobsen Conference, Faculty Judge
- 2006 Review for: Biological Sciences Funding Program

3. Profession (2006-2017)

- 2013-2016 Paleontological Society Fellows Committee
- 2014 NSF advisory panel for the Advancing Digitization of Biodiversity Collections program
- 2011 Invited participant in "Colloquium: A new chapter for marine time-series research in tropical America", Bocas del Toro, Panama, Sept 2011
- 2011 Member of the Center of Ocean Solutions (Okeanos Foundation) working group on corals and climate change (Monterey, CA)
- 2011 Member of the NCEAS (National Center for Ecological Analysis and Synthesis) working group on "Tropical coral reefs of the future: modeling ecological outcomes from the analyses of current and historical trends" (Santa Barbara, CA)
- 2009 NSF advisory panel for the Sedimentary Geology and Paleobiology program (declined)
- 2008 NSF advisory panel for the Sedimentary Geology and Paleobiology program
- 2008-present *Bulletins of American Paleontology* and *Palaeontographica Americana*, Editorial Board
- 2008-2010 Paleontological Society, Medal Committee
- 1996-present Coordinator, Neogene Marine Biota of Tropical America (NMITA) World-Wide Web Database
- 2006- present Member of the Marine Invertebrate Working Group, Paleobiology Database; and invited NCEAS workshop participant, Santa Barbara, CA
- 2005- present Coordinating Author (with J. Stolarski, S. Cairns, and G. Stanley), *Treatise of Invertebrate Paleontology*, Coelenterate volume F, Scleractinia.
- 1997-2006 Editor, *Journal of Paleontology* (term 1, with B.Witzke and J.Golden, 1997-2000; term 2, with B.Witzke, J.Golden and J. Adrain, 2000-2003; term 3, with J. Adrain and C. Brochu, 2003-2006)

- 2006 NSF advisory panel for the Biological Research Collections program (declined)
- 2006 Invited National Evolutionary Synthesis Center (NESCent) workshop participant, "Developing and Integrating taxonomic databases for the 21st century", August 24-26, 2006, Durham, NC
- 2006 Invited NSF workshop participant, "Future Research Directions in Paleontology Workshop", April 8-9, 2006, Washington, DC.

Symposium/workshop organizer (2006-2015):

- Symposium co-organizer (with John Pandolfi), "Biotic response to environmental change: ecology, evolution, and the future (symposium for Jeremy Jackson)", North American Paleontological Conference, Cincinnati, June 21-26, 2009.
- Encyclopedia of Life: Biodiversity Synthesis meeting, "Systematics and evolution of scleractinian corals", National Museum of Natural History, Smithsonian Institution, June 15-19, 2009 [Organizer= A.F. Budd; Co-organizers= S.D. Cairns, N. Knowlton].
- Session co-organizer (with Jaroslaw Stolarski), " Crossroads and landmarks in scleractinian evolution: implications for higher level systematics", X International Symposium on Fossil Cnidaria and Porifera, St. Petersburg, Russia, 2007.
- Educational workshop co-organizer (with D.F. McNeill, J.S. Klaus), "Paleoecology of fossil coral reefs and sample collection", Universidad Autónoma de Santo Domingo, Enero 9-11, 2007
- Educational workshop co-organizer (with D.F. McNeill, J.S. Klaus, R.A. Lopez Perez), "Paleoecology and Sedimentology of Ancient Coral Reefs in the Dominican Republic", Universidad Autónoma de Santo Domingo, Marzo 16-17, 2006

Manuscript reviews (2006-2015):

- 2005/2006: Proceedings of the Royal Society B (1); Palaios (1); Ecology Letters (1); Coral Reefs (1); Journal Biogeography (1); Geology (1); Geochemistry, Geophysics, Geosystems (1).
- 2006/2007: Journal of Paleontology (1), Caribbean Journal of Science (1), Coral Reefs (1), Journal of Biogeography (1), Biological Bulletin (1), IAS publication-"Carbonate systems during the Oligocene-Miocene climatic transition" (1), Marine Biology (1), 2 book chapter reviews for W.H. Freeman & Co.
- 2007/2008: Marine Biology (1), Biological Bulletin (2), Zoologica Scripta (2), book chapter review for Jones and Bartlett Publishers, Palaeontology (2), Science (1), Palaeogeography, Palaeoclimatology, Palaeoecology (1), Palaios (1).
- 2008/2009: Ecology Letters (1), Proceedings of the Biological Society of Washington (1), Marine Ecology Progress Series (2), Science (1).
- 2009/2010: Proceedings of the Royal Society B (4), Geology (1), Journal of Paleontology (1), Palaios (1), Proceedings of the National Academy of Science (2), review of book proposal for "Geometric Morphometrics for Biologists" (Elsevier/Academic Press).
- 2010/2011: Alcheringa (1); Biological Bulletin (1); Journal of Morphology (2); Coral Reefs (2); Journal of Natural History (1); Contributions to Zoology (2); PLoS ONE (1); Hydrobiologica (1).

2011/2012: Journal of Morphology (1), Contributions to Zoology (1), Journal of Evolutionary Biology (1), Molecular Phylogenetics and Evolution (1), Acta Paleontologica Polonica (1), Invertebrate Systematics (1), Geodiversitas (1), Royal Society, Proceedings B (1), Journal of Paleontology (1), Zoologica Scripta (1).
2012/2013: Bulletins of American Paleontology (1), Coral Reefs (3), BMC Evolutionary Biology (1), Palaios (1), Coral Reefs of the Eastern Pacific (book chapter) (1), Zoological Journal of the Linnean Society (1), Biological Journal of the Linnean Society (1)
2013/2014: Molecular Phylogenetics and Evolution (1), Zookeys (1), Coral Reefs (1), Journal of Systematic Palaeontology (1), PlosOne (1), Lethaia (1).

Research grant peer reviews (2006-2015):

2005/2006. National Science Foundation [Biological Oceanography (1), Sedimentary Geology and Paleobiology (1)]
2006/2007. NOAA Office of Ocean Exploration (1); National Science Foundation [Biological Oceanography (2), Biological Research Collections Program (1)], National Geographic Society (1)
2007/2008: National Geographic Society (1), Swiss National Science Foundation (1), National Science Foundation [Sedimentary Geology and Paleobiology Program (1), CREST (1), Biological Research Collections Program (1), Systematic Biology (1)]
2008/2009: National Science Foundation [Sedimentary Geology and Paleobiology Program (3)], Deutsche Forschungsgemeinschaft (1), ACS Petroleum Research Fund (1).
2009/2010: NSERC Discovery Grant (1); National Science Foundation [Sedimentary Geology and Paleobiology Program (1); Earth Sciences Instrumentation (1)].
2010/2011: NSERC Discovery Grant (1); Earthwatch (1); National Science Foundation [Sedimentary Geology and Paleobiology Program (2)].
2011/2012: NSF Dimensions of Biodiversity Program (1).
2013/2014: Sedimentary Geology and Paleobiology (1), National Geographic Society (1).