

**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

1995-present Professor of Geoscience, The University of Iowa.

2005-present Research Associate, National Museum of Natural History, Smithsonian Institution, Washington, DC.

1998-2004 Chair, Department of Geoscience, The University of Iowa.

1989-95 Associate Professor of Geology, The University of Iowa.

1984-89 Assistant Professor of Geology, The 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, The University of Iowa.

1978-79 Instructor, Augustana College, Rock Island, Illinois.

1976 Lecturer, California State University at Long Beach.

3. Honors and Awards

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
International Association for the Study of Fossil Cnidaria
International Palaeontological Association
International Society for Reef Studies
Paleontological Research Institution
Paleontological Society of America
Sigma Xi
Society for the Study of Evolution
Society of Economic Paleontologists and Mineralogists
Society of Systematic Biology

SCHOLARSHIP

1. Publications

a. Refereed

- Professional books (edited) and monographs

Nehm, R. H. and A. F. Budd (eds), 2008. *Evolutionary Stasis and Change in the Dominican Republic Neogene*, Kluwer Academic/Plenum Publishers, New York, 310pp.

Miller, D.J. and A.F. Budd (eds), 2001. Morphology and Evolution of the late Cenozoic marine biota of tropical America. *Journal of Paleontology* 75(3), Special Issue, *Journal of Paleontology* 75(3), p. 473-751.

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.

J.B.C. Jackson, A.F. Budd, and A.G. Coates (eds), 1996, *Evolution and Environment in Tropical America*, University of Chicago Press, Chicago, 425 pp.

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.

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

- (76) Budd, A. F. and C. C. Wallace. In press. 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*.
- (75) Budd, A. F. and J. Stolarski. In press. 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*.
- (74) Pandolfi, J. M. and A. F. Budd. In press. Morphology and ecological zonation of Caribbean reef corals: the *Montastraea* 'annularis' species complex. *Marine Ecology Progress Series*.
- (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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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*, Kluwer Academic/Plenum Publishers, 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. Wytenbach, 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. Stemann. 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. Stemann, 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. Stemann, 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: Columbelloidea). *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. *Palaios* 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. 1999. *Coral Reef Communities*. In: Licker, M.D., Publisher, McGraw-Hill Yearbook of Science and Technology 2000, p.99-101.
- Budd, A.F., K.G. Johnson, and T.A. Stemann. 1996-2004. Zooxanthellate Corals, in A.F. Budd and C.T. Foster Jr (Coordinators), 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

- 2006 National Science Foundation Grant DBI-0544235 (3 yrs., 4/15/06-4/14/09, \$284,724); "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., 4/1/06-3/31/09, \$449,920; 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

- 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

- (20) *Budd, A.F., and J. Stolarki, 2007. Rethinking the phylogeny of scleractinian corals: reconciling molecular and morphologic data within the family Mussidae. X International Symposium on Fossil Cnidaria and Porifera, St. Petersburg, Russia.
- (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.
- (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. Stemann. 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

- (51) *Budd, A.F. 2006. The origin and divergence of modern Caribbean reef coral genera. Geological Society of America Abstracts with Programs, 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, 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.
- (42) *Budd, A.F. and J.M. Pandolfi, 2004. Overlapping species boundaries and reticulate evolution in reef corals: Evidence from the fossil record. Geological Society of America Abstracts with Programs, vol.36, no. 5, p. 525.
- (41) Schultz, H.A. and A.F. Budd, 2004. Evolution of the Caribbean reef corals *Montastraea cavernosa* by analysis of morphologic change. Geological Society of America Abstracts with Programs, North Central Section, vol. 35, no. 2, p.51.
- (40) Beck, B.R. and A.F. Budd, 2004. Evolutionary patterns in the reef coral *Siderastrea* during the Mio-Pliocene of the Dominican Republic. Geological Society of America Abstracts with Programs, North Central Section, vol. 35, no. 2, p.51.
- (39) Klaus, J.S., A.F. Budd, and D.F. McNeill, 2004. Reef coral assemblages of the Miocene to Pliocene of the northern Dominican Republic. Geological Society of America Abstracts with Programs, North Central Section, vol. 35, no. 2, p.51-52.
- (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.
- (37) Kerns, E.E. and A.F. Budd, 2003. Evolution of the Neogene Caribbean reef coral *Stylophora*: Analyzing morphologic change within species. Geological Society of America Abstracts with Programs, North Central Section, vol. 35, no. 2, p. 14. (poster)
- (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.
- (35) *Budd, A.F. and J.M. Pandolfi. 2001. Late Pleistocene evolution of a dominant Caribbean reef coral: Speciation and extinction within the *Montastraea annularis* complex. Geol. Soc. Amer. Abs. Prog. 32(7):A378.
- (34) *Budd, A.F. 2001. Early evolution of a dominant Caribbean reef coral: morphometrics and phylogenetic analysis of Mio-Pliocene *Montastraea* from the Dominican Republic. No. Amer. Paleontol. Conv. 2001, PaleoBios 21(2):A36-37 (invited).
- (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.

- (30) *Budd, A.F., C.T. Foster Jr., J.P. Dawson, and K.G. Johnson. 1998. Dynamic searches of the Neogene Marine Biota of Tropical America (NMITA) World-Wide Web database. *Geol. Soc. Amer. Abs. Prog.* 30(7): A265 (invited).
- (29) *Budd, A.F., C.T. Foster Jr., J. Golden, J.P. Dawson, J.L. Chidsey, and H. Fortunato. 1997. Surfing fossil biodiversity data on the World-Wide Web: The Neogene Marine Biota of Tropical America (NMITA) database. *Geol. Soc. Amer. Abs. Prog.* 29(6): A103-104.
- (28) Knowlton, N. and A.F. Budd. 1997. Recognizing species present and past. *Geol. Soc. Amer. Abs. Prog.* 29(6): A168 (invited).
- (27) *Budd, A.F. and K.G. Johnson. 1997. Contrasting evolutionary patterns in rare and abundant species during Plio-Pleistocene turnover of Caribbean reef corals. *Geol. Soc. Amer. Abs. Prog.* 29(6): A168 (invited).
- (26) McNeill, D.F., A.F. *Budd, P.F. Borne, and A.G. Coates. 1996. Episodic reef development in a mixed carbonate-siliciclastic system, Pliocene/Pleistocene of Costa Rica. *Geol. Soc. Amer. Abs. Prog.* 28(7): A310.
- (25) Fortunato, H., J. Golden, A.F. Budd, C.T. Foster, Jr. and R.A. Petersen. 1996. Collection Management Features of NMITA: A WWW Taxonomy Database. *Amer. Malacological Union, 62th Annual Meeting*, p.36.
- (24) Fortunato, H., J. Golden, A.F. Budd, C.T. Foster, Jr. and R.A. Petersen. 1996. Neogene Marine Invertebrates of Tropical America (NMITA): A World-Wide Web Taxonomy Database. *Amer. Malacological Union, 62th Annual Meeting*, p.35.
- (23) *Budd, A.F., C.T. Foster, Jr., H. Fortunato, J. Golden, and R.A. Petersen. 1996. Neogene Marine Invertebrates of Tropical America: A World-Wide Web Taxonomy Database. *Paleont. Soc. Spec. Publ.* 8, p.52.
- (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).
- (21) *Budd, A.F. and K.G. Johnson. 1995. The geography of Plio-Pleistocene turnover in Caribbean reef coral communities. *Geol. Soc. Amer. Abs. Prog.* 27(6): A166.
- (20) *Budd, A.F., K.G. Johnson, and J.B.C. Jackson. 1994. Patterns of replacement in late Cenozoic Caribbean coral communities. *Geol. Soc. Amer. Abs. with Prog.* 25(7): 454 (invited).
- (19) Ruiz, H.M., L.A. González, A.F. Budd, G. Guoquiu, and V. Monell-Gonzalez. 1993. Late Miocene (Tortonian to Messinian) mixing-zone diagenesis of the Mona reef complex, Isla de Mona, Puerto Rico. *Geol. Soc. Amer. Abs. with Prog.* 25(6): A228.
- (18) *Budd, A.F., K.G. Johnson, and T.A. Stemann. 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.
- (16) Anderson, L.C., D.H. Geary, A.F. Budd, R.H. Nehm, K.G. Johnson, and T.A. Stemann. 1992. Paleoenvironmental control of species distributions in Neogene invertebrate taxa of the Dominican Republic. *Fifth North American Paleontological Convention, Abstracts and Program. Paleontological Society Spec. Publ.* 6, p. 6.

- (15) *Budd, A.F., T.A. Stemann, 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).
- (14) *Budd, A.F. and K.G. Johnson. 1992. Morphometric species recognition and phylogeny reconstruction in scleractinian reef corals. Fifth North American Paleontological Convention, Abstracts and Program. Paleontological Society Spec. Publ. 6, p. 42 (invited).
- (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. Stemann. 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 in other UI Department Colloquia and at other institutions (last 10 years)

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"

October 2004 Department of Geology, University of Illinois, Urbana, IL, "Species boundaries in reef corals: Insight from the fossil record"

April 2004 Department of Biological Sciences, University of Iowa, "Species boundaries in reef corals: Insight from the fossil record"

May 2001 Department of Paleobiology, National Museum of Natural History, Smithsonian Inst., Washington, DC, "Plio-Pleistocene extinctions and the origins of the modern Caribbean reef corals"

October 1998 Cornell College, Mt. Vernon, IA

April 1996 State University of New York, Buffalo.

April 1996 Harvard University.

October 1993 Kansas Geological Survey, Lawrence.

April 1993 American Museum of Natural History, New York.

March 1993 Louisiana State University, Baton Rouge.

8. Pending decisions

a. Publications

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 . Mitochondrial and nuclear genes suggest that stony corals are monophyletic but most families of stony corals are not (Order Scleractinia, Class Anthozoa, Phylum Cnidaria). Manuscript to be submitted to *PLoS One* in May 2008.

Budd, A.F. Tracing the long-term evolution of a species complex and its relationship to environmental change: Examples from the *Montastraea "annularis"* complex. Manuscript submitted to the *Proceedings of the Tenth International Congress on Fossil Cnidaria and Porifera* in February 2008.

TEACHING AT THE UNIVERSITY OF IOWA

1. Teaching Assignments

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	# Undergrad Advisees
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Spring 2008	12:004 Evolution and History of Life	4/3	104/69	6	~30 ES; 5 Geo Honors
Fall 2007	Career Development Award				
Spring 2007	12:004 Evolution and History of Life	4/3	128/75	3	
	12:004 Honors Lab	x	6		
Fall 2006	12:145 Morphometrics	3	5	3	~30 ES; 10 Geo Honors
Spring 2006	12:004/12:006 Evolution and History of Life	4/3	95/51	3	~30 ES
	12:004 Honors Lab (50%)	x	9		
	12:190 Undergraduate Geoscience Colloquium (50%)	1-2	8		
	12:225 Paleontology Seminar (25%)	1-3	7		
Fall 2005	12:121 Principles of Paleontology	3	43	4	~30 ES
Spring 2005	12:190 Undergraduate Geoscience Colloquium	1-2	8	5	~30 ES
Fall 2004	12:121 Principles of Paleontology	3	29	5	~30 ES
	159:10/100 Environmental Seminar(100%)	0-1	23/26		
Spring 2004	12:190 Undergraduate Geoscience Colloquium (100%)	1-2	8	5	
Fall 2003	12:121 Principles of Paleontology	3	31	5	
	12:207 Geologic Orientation	1	11		
Spring 2003	12:190 Undergraduate Geoscience Colloquium (100%)	2	8	4	
Fall 2002	12:121 Principles of Paleontology	3	37	4	
	12:207 Geologic Orientation	1	6		
Spring 2002	Career Development Award				
Fall 2001	12:121 Principles of Paleontology	3	36	3	
	12:207 Geologic Orientation	1	9		
Spring 2001	none			4	
Fall 2000	12:207 Geologic Orientation	1	9	3	
Spring 2000	12:116 Spring Field Trip (100%)	2	17	4	
Fall 1999	12:207 Geologic Orientation (50%)	1	12	3	
Spring 1999	12:119 Directed Study (Morphometrics)	2	5	3	
Fall 1998	12:107 Geologic Orientation	1	6	3	
Spring 1998	12:004/006 Evolution & History of Life (50%)	4	151	3	
	12:116 Spring Field Trip (100%)	2	17		
Fall 1997	12:107 Geologic Orientation	3	8	3	
	12:121 Principles of Paleontology (50%)	3	42		
	12:225 Paleontology Seminar	1-3	8		
Spring 1997	12:004/006 Evolution & History of Life (50%)	4	149	1	
	12:116 Spring Field Trip (100%)	2	23		
	12:004/006 Evolution & History of Life - Honors section (50%)	x	10		
Fall 1996	12:121 Principles of Paleontology (50%)	3	36	2	

Spring 1996	12:004/006 Evolution & History of Life (50%)	4	146	2	
	12:004/006 Evolution & History of Life - Honors section (50%)	x	10		
Fall 1995	12:121 Principles of Paleontology (50%)	3	30	2	
Spring 1995	12:004/006 Evolution & History of Life (50%)	4	~150	2	
	12:004/006 Evolution & History of Life - Honors section (50%)	x	~10		

2. STUDENTS SUPERVISED

a. Ph.D. Candidates

Name	Years	Outcome	Comments
<i>D. Shapo</i>	2003-	<i>In progress</i>	<i>Comps 2004</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>Asst. Professor, Eastern Tennessee State University</i>
<i>K. Ketcher</i>	1993-1996	<i>Resigned</i>	
<i>T.A. Stemann</i>	1985-1991	<i>Ph.D. 1991</i>	<i>Asst. Professor, 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>M. Tibbits</i>	2007-	<i>In progress</i>	
<i>A. Grass</i>	2007-	<i>In progress</i>	
<i>R. Bykowski</i>	2007-	<i>In progress</i>	
<i>T. Fadiga</i>	2006-	<i>In progress</i>	
<i>J. Cassara</i>	2006-	<i>In progress</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>Ph.D. candidate at the University of Queensland</i>
<i>J. Toennies</i>	2001-2003	<i>M.S. 2003</i>	
<i>D. Shapo</i>	2001-2003	<i>M.S. 2003</i>	<i>Ph.D. candidate at the University of Iowa</i>
<i>J. Klaus</i>	1999-2001	<i>M.S. 2001</i>	<i>Assistant 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>M. Laird</i>	2008-	<i>In progress</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	<i>B.S. 2003</i>	

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

d. Post Docs/ visiting students from other institutions

Name	dates	Institution	project
<i>J.S. Klaus</i>	2005-	University of Miami	NSF EAR-0445789

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

Name	Outcome	Comments
<i>E. Wilberg</i>	<i>Comps 2008, Ph.D. in progress</i>	
<i>S. Drumheller</i>	<i>Comps 2007, Ph.D. in progress</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. in progress</i>	
<i>T. Karim</i>	<i>Comps 2005, Ph.D. in progress</i>	
<i>T-W. Ng</i>	<i>Comps 2004, Ph.D. in progress</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:

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 Bureson (1998-1999)

1997 REU supplement (\$6000), National Science Foundation Grant EAR97-25273; students= Jim Klaus (1998-1999)

1994 REU supplement (\$5000), National Science Foundation Grant EAR-9219138; students= Dyanna Czeck (1994-95), Mike McCormick (1995)

1993 REU supplement (\$5000), National Science Foundation Grant EAR-9219138; students= Bridget Tompkins (1993-94)

2008-2009 IREU (\$2995), student= Myra Laird

2003-2004 IREU (\$3000), student= Troy Fadiga

SERVICE

1. Department (last 10 years)

- 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.
- 2004-2005. ES General Advisor, Geoscience Honors Advisor. *Chair of:* Computer Committee, P&T Committee for J. Gilotti, Repository Committee, Mentoring Committee for C. Brochu; *Member of:* ES Advisory Committee.
- 1998-2004. Chair, Department of Geoscience.
- 2003-2004. *Chair of:* Mentoring Committee for J. Adrain, C. Brochu. *Member of:* Terrestrial Paleoecology Search Committee, Mentoring Committee for J. Gilotti, W. Illman, D. Peate.
- 2002-2003. *Chair of:* Stable Isotope Search Committee, Mentoring Committee for J. Adrain, C. Brochu. *Member of:* Mentoring Committee for J. Gilotti, A. Bettis, W. Illman.
- 2001-2002. *Chair of:* Mentoring Committee for J. Adrain, C. Brochu. *Member of:* Mentoring Committee for J. Gilotti, A. Bettis, W. Illman; Peer Review Committee for P. Heckel, Y.-K. Zhang.
- 2000-2001. *Chair of:* Mentoring Committee for J. Adrain, C. Brochu. *Member of:* Mentoring Committee for J. Gilotti, A. Bettis; P&T Committee for T. Foster; Peer Review Committee for M. Reagan.
- 1999-2000. *Chair of:* Vertebrate Paleontology Search Committee, Mentoring Committee for J. Adrain. *Member of:* Mentoring Committee for J. Gilotti.
- 1998-1999. *Member of:* Invertebrate Paleontology Search Committee, Mentoring Committee for J. Gilotti.
- 1997-1998. *Member of:* Graduate Admissions Committee, Structural Geologist Search Committee, Computer Committee, Faculty Hiring Committee, and Strategic Plan Committee.
- 1996 - 1997. *Chair of:* P&T Committee for Y-K. Zhang; *Member of:* Graduate Admissions Committee, Mentoring Committee for J.E. Faulds, Environmental Sciences Degree Green Track Committee, Computer Committee, Faculty Hiring Committee, and Strategic Plan Committee.
- 1995 - 1996. *Chair of:* Mentoring Committee for J.E. Faulds, Y-K. Zhang; *Member of:* Graduate Admissions Committee, Environmental Sciences Degree Green Track Committee, Computer Committee, and Faculty Hiring Committee.
- 1994 - 1995. *Chair of:* P&T Committee for L.A. González.
- 1993 - 1994. Undergraduate advising.

2. College (last 10 years)

1996 - 1997 College of Liberal Arts Promotion and Tenure Committee

3. University (last 10 years)

2006 Review for: Biological Sciences Funding Program
2002 - 2003 Review for: Biological Sciences Funding Program
2000 – 2001 Review for: Biological Sciences Funding Program

4. Profession

2008 NSF advisory panel for the Sedimentary Geology and Paleobiology program
2008 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. Stolarksi, 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.
2004 NSF advisory panel for the Biological Research Collections program
2003 Invited NSF workshop participant, "Development of a National Systematics Infrastructure: A Virtual Instrument for the 21st Century", New York Botanical Garden, New York City
2003 Invited NCEAS workshop participant, Paleobiology Database: Marine Invertebrate Working Group & Advisory Board Meeting, Santa Barbara, CA
2001 NSF advisory panel for the Biological Research Collections program
1993-2001 Systematics Coordinator, Panama Paleontology Project, Smithsonian Tropical Research Institute
1997-2001 The Paleobiological Fund, Advisory Committee
1988-97 U.S. Councillor, International Assoc. for the Study of Fossil Cnidaria
1992-94 Trustee, Paleontological Research Institution
1984-92 Advisory Editor, *Coral Reefs*

Review Committees:

2002, 2005 American Museum of Natural History, New York, Promotion and Tenure Committee

Symposium/workshop organizer:

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

Mini-symposium co-organizer (with Nancy Knowlton and Hiro Fukami), "Coral Taxonomy and Phylogeny: Integrating Molecular and Morphological Approaches", 10th International Coral Reef Symposium, Okinawa, Japan, 2004.

Theme Session co-organizer (with Christopher Crow on behalf of the Paleontological Society), "Fossil reef systems", North Central Section Meeting of the Geological Society of America, St. Louis, MO, 2004.

Symposium co-organizer (with R.H. Nehm), "Species-level and Community-level Stability: Case Studies from the Dominican Republic Neogene", No. Amer. Paleontol. Conv., Berkeley, CA, 2001.

Theme Session co-organizer (with C.R. Marshall and J. Alroy on behalf of the Paleontological Society), "Evolving biodiversity: From the field to the database", Geol. Soc. Amer. Annual Meeting, Reno, NV, 2000.

Workshop co-organizer (with J.B.C. Jackson), "PPP / NMITA Molluscan Workshop", Naturhistorisches Museum Basel, Switzerland, June, 1998.

Symposium co-organizer (with J.B.C. Jackson and A.G. Coates), "Environmental and biological change in Neogene and Quaternary Tropical America", Fifth North American Paleontological Convention in Chicago, June, 1992.

Symposium co-organizer (with B.D. Mishler), "Species and evolution in clonal organisms", December 1988 meeting of American Society of Zoologists in San Francisco.

Manuscript reviews for: *Bulletins of Marine Science*, *Marine Biology*, *Coral Reefs*, *Paleobiology*, *PALAIOS*, *Bulletins of American Paleontology*, *Paleontographica Americana*, *Geobios*, *Journal of Experimental Marine Biology and Ecology*, *Geological Society of America Bulletin*, *Journal of Paleontology*, *Systematic Botany*, *Mem. Ass. Australas. Palaeontols.*, *Proceedings of the Biological Society of Washington*.

1996/1997. *Coral Reefs* (1), *Paleobiology* (1), *PALAIOS* (1), *Journal of Paleontology* (2), *Journal of the Geological Society of Jamaica* (1), *Acta Paleontologica Polonica* (1).

1997/1998. *Coral Reefs* (1), *PALAIOS* (1).

- 1998/1999. *Acta Paleontologica Polonica* (1), *Caribbean Journal of Science* (1), *Bulletins of Marine Science* (1), *PALAIOS* (1).
- 1999/2000. *Acta Paleontologica Polonica* (1), *Bulletins of Marine Science* (1), *Smithsonian Contributions to Zoology* (1), *Proceedings of the Biological Society of Washington* (1).
- 2000/2001. *Paleobiology* (1), *PALAIOS* (2), *Proceedings of the Biological Society of Washington* (1).
- 2001/2002. *Evolution* (1), *Proceedings of the Royal Society: Biological Sciences* (1), *Proceedings of the Biological Society of Washington* (1), *Quaternary International* (1), *Gulf Coast Section SEPM Foundation Special Volume* (1).
- 2002/2003. *Acta Palaeontologica Polonica* (1), *Zoologische Mededelingen* (1).
- 2003/2004. *Paleobiology* (1); *Coral Reefs* (2); *Palaeontologica Electronica* (2); *Species 2000* (1); *Palaeogeography, Palaeoclimatology, Palaeoecology* (1); *Caribbean Journal of Science* (1); *Geology* (1).
- 2004/2005. *Palaeontologica Electronica* (1), *Sedimentary Geology* (1); *Stratigraphica Austria* (1); *Proceedings of the National Academy of Science* (1); *Ecology* (1); *Zootaxa* (1); *Caribbean Journal of Science* (1); *Monographs in Systematic Botany from the Missouri Botanical Garden* (1).
- 2005/2006: *Proceedings of the Royal Society B* (1); *Palaios* (1); *Ecology Letters* (1); *Coral Reefs* (1); *Journal of 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).

Research grant peer reviews: National Science Foundation (Systematic Biology, Biol. Research Resources, Biological Oceanography, and Geology and Paleontology), National Geographic Society, Smithsonian Institution, University of Puerto Rico Sea Grant Program, the Petroleum Research Fund.

- 1996/1997. National Science Foundation [Systematic Biology (2), and Geology and Paleontology (1)], University of Puerto Rico Sea Grant Program (1)].
- 1997/1998. National Science Foundation [Systematic Biology (1)].
- 1998/1999. National Science Foundation [Geology and Paleontology (2), Biological Oceanography (1)].
- 1999/2000. National Science Foundation [Geology and Paleontology (2), Systematic Biology (1)], National Undersea Research Program (NOAA) (1).
- 2000/2001. National Science Foundation [Geology and Paleontology (2), Biological Oceanography (2)]
- 2001/2002. National Science Foundation [Geology and Paleontology (2), Biological Oceanography (2)]
- 2002/2003. National Science Foundation [Geology and Paleontology (2)], Petroleum Research Fund (1)

- 2003/2004. National Science Foundation [Geology and Paleontology (2), International Programs (1)]
- 2004/2005. National Science Foundation [Biological Oceanography (1), Sedimentary Geology and Paleobiology (1)], National Geographic Society (1)
- 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 (1), National Science Foundation [Sedimentary Geology and Paleobiology Program (1), CREST (1), Biological Research Collections Program (1), Systematic Biology (1)]
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