

UCMP Represents at National Conferences

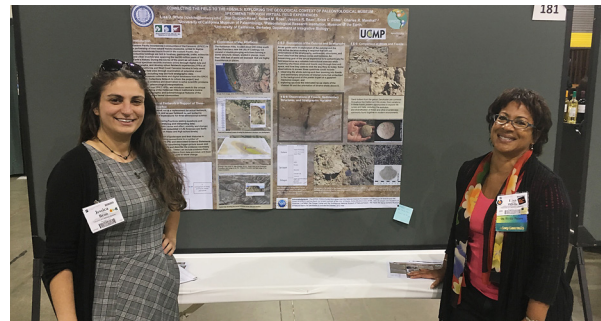
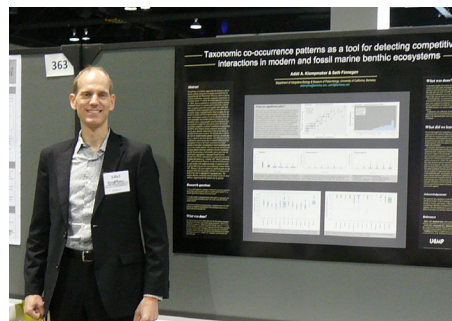
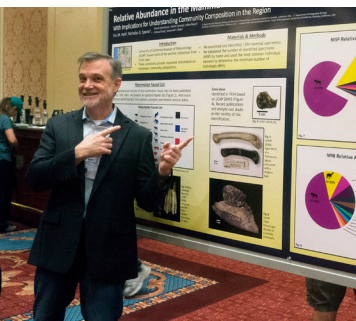
UCMPers were a very visible presence at the 76th annual meeting of the Society of Vertebrate Paleontology (SVP). Held in Salt Lake City in October 2016, the meeting was co-chaired by UCMP alum **Randy Irmis**. Attendees enjoyed a welcoming reception at the Natural History Museum of Utah housed in the new Rio Tinto Center nestled into the foothills of the Wasatch Mountain Range above Salt Lake City. Members of the UCMP community presented thirteen talks and nine posters. Students presenting at the conference were partially supported by UCMP travel grants made possible by the generosity of UCMP donors. The UCMP also hosted a reception for UCMP alumni and friends.

From the Padian Lab, **Ashley Poust** gave a talk and **Sara ElShafie** and **Mackenzie Kirchner-Smith** presented posters on their respective research projects. Undergrads **Savannah Blake** (poster) and **Ben Kligman**, and alum **Armita Manafzadeh** (talk) also attended. From the Barnosky Lab, graduate students **Eric Holt** and **Nick Spano** shared research posters and recent alums, **Allison Stegner** and **Emily Lindsey**, shared highlights of their research in oral sessions. Postdoctoral Scholar **Brian Rankin** and collections assistant **Lauren Fowler** presented their ongoing work on Eocene mammals in the Uinta Basin and Wasatch Range with Pat Holroyd.

UCMP staff **Mark Goodwin** and **Pat Holroyd** were authors on several papers and **Lisa White** presented a poster on a developing website about the McKittrick tar seep

fossils. Collections assistant **Lillian Kennedy Pearson** presented a poster together with Vince Santucci of the National Park Service on vertebrate paleontology resource monitoring at Pt. Reyes National Seashore.

At the Geological Society of America (GSA) annual meeting in Denver in September, members of the Marshall Lab (**Lucy Chang**) and the Finnegan Lab (**Seth Finnegan**, **Adiel Klompaker**, **Larry Taylor**, **Emily Orzechowski**) presented in several sessions during the 4-day conference. Staff members **Diane Erwin** shared new details on fossil insects from Nevada and **Lisa White**, together with EPICC (Eastern Pacific Invertebrate Communities of the Cenozoic) partners, showcased a draft of the virtual field experience modules that will be part of the EPICC
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Top row: Brian Rankin at SVP; Greg Wilson, Mark Goodwin and SVP Host Randy Irmis; Lillian Pearson with T. rex at SVP; Mackenzie Kirchner-Smith discusses SVP poster. Bottom row: Eric Holt at SVP; Ash Poust with Synthetoceras at SVP; Postdoctoral Scholar Adiel Klompaker at GSA; Jessica Bean and Lisa White present at GSA.



Director's Letter

Happy New Year! I hope you all had a rejuvenating Holiday Season. Here at UCMP we await, with some anxiety I must confess, to the changes that 2017 will bring. At this point none of us know how the President-elect will affect National priorities or funding. But one thing is clear - UCMP's mission to investigate and promote the understanding of the history of life and the diversity of the Earth's biota through research and education is going to be more important than ever. Had you asked me a year ago where I thought we stood nationally on the issues of climate change, I would have said that I think the war is won, especially in light of international agreement on carbon emissions. But now we need to double down again. Thus, our work on our soon-to-be-released web resource on

Understanding Global Change (UGC), takes on a new significance. More locally, we are eagerly looking forward to a new Berkeley Chancellor, as we look for the return of strong leadership, especially as we brace ourselves for the next round of budget cuts and the new government. I am pleased to say that under the guidance of our most excellent interim Executive Vice Chancellor and Provost, Carol Christ, the campus has been in very good hands. She has long been a fan of the museums, and has been paving the way (for everyone on campus) for as gentle an adjustment to the campus budget deficit as could be hoped for - this year, our permanent cut was only 4%, compared with 10% last year. But we have two more years of permanent cuts coming. Fortunately, for UCMP our endowments and gifts continue to grow, buffering us well from campus budget cuts. So, as we renew our commitment to the mission of UCMP and Cal, please accept my heartfelt 'thank you' for your support, in so many ways, of UCMP! We are all greatly appreciative!

Sincerely,
Charles Marshall

Who is UCMP?

Director: Charles Marshall

Assistant Directors:

Mark Goodwin	Lisa White
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Curators:

Anthony Barnosky*	Jere Lipps*
Roy Caldwell	Cindy Looy
William Clemens*	Charles Marshall
Seth Finnegan	Kevin Padian
Carole Hickman*	Leslea Hlusko
Tim White	David Lindberg*
James Valentine*	

Curatorial Associates:

Walter Alvarez	Roger Byrne
Lynn Ingram	

Admin. Assistant:

Chris Mejia

Museum Scientists:

Erica Clites	Ken Finger
Diane Erwin	Patricia Holroyd

Education & Public Outreach:

Jessica Bean	Helina Chin
Trish Roque	Anna Thanukos

Edited by Lisa White

Layout & graphics by Helina Chin

For the broader UCMP community, visit the UCMP website: www.ucmp.berkeley.edu; Understanding Evolution: www.understandingevolution.org; and Understanding Science: www.understandingscience.org

*Emeritus/a

The Newsletter Team at UCMP provides the news in a variety of formats.

If you are interested in receiving printed newsletters or email only, let us know!

Please provide your email address to Chris Mejia at cmejia@berkeley.edu



The Bearded Lady Project



The portrait gallery featured UCMP Women Scientists amongst them (clockwise) Lisa White, Erica Clites, Carole Hickman and Pat Holroyd.

At both the SVP and GSA meetings, portraits from **The Bearded Lady Project** (<http://thebeardedladyproject.com>) were unveiled and the women of UCMP featured prominently in the gallery of photos shown at the conferences. They include portraits of **Carole Hickman, Pat Holroyd, Erica Clites, Cindy Looy, Lisa White, Diane Erwin** and many of the female graduate students at the UCMP. All portraits by Kelsey Vance.

Faculty in the Spotlight



Cindy is pictured above with graduate student Jeff Benca and a Joshua tree in Death Valley, CA.

Congratulations to **Cindy Looy** who was granted tenure in 2016 and is now Associate Professor of Integrative Biology! Cindy had a busy fall semester co-teaching at the Gump field station in Moorea. At the GSA annual meeting in Denver, Cindy co-ran a symposium titled: *Novel Approaches to Plant Evolution from Paleontological, Physiological, and Developmental Perspectives*.

At the end of the 2016, **Tony Barnosky** accepted a position as Executive Director of Stanford's Jasper Ridge Biological Reserve. We congratulate Tony on his new role at Stanford and we are happy he'll remain connected to the UCMP as curator and Professor Emeritus.

Professor Emeritus **David Lindberg** reminded us that five UCMP alumni can be found at the Smithsonian National Museum of Natural History in Washington, DC where their careers are thriving. In the photo from left: **Nick Pyenson**, Curator of Fossil Marine Mammals (Ph.D. 2008), **Christopher Meyer**, Research Zoologist, Invertebrates (Ph.D. 1998), **Karen Osborn**, Research Zoologist, Invertebrates (Ph.D. 2007), **Ellen Strong**, Research Zoologist, Invertebrates (B.A. 1991), and **Allen Collins**, Zoologist, Invertebrates (Ph.D. 1999). Photographed in the



UCMP alums who now work at the Smithsonian NMNH

Smithsonian's Kenneth E. Behring Family Rotunda. **Go UCMP!!**

UCMP Research Associate **Julia Sankey** and students at CSU Stanislaus published two papers in *PaleoBios* in 2016 on Mehrten (early Pliocene, Central CA) vertebrates and geology (see in Publications list). This work was supported by a \$5 million dollar grant from the Department of Education to support undergraduate students in STEM. Sankey students were paid to do field, lab, and museum work (at the UCMP). She and Jake Brewer are also publishing a book on the Mehrten and Central CA fossil wildlife for the general public.

Recognition

Judy Scotchmoor, Assistant Director of Education and Public Programs Emerita was honored with the Pojeta Award from the Paleo Society in September 2016. The award recognizes exceptional professional or public service by individuals or groups in the field of paleontology above and beyond that of existing formal roles or responsibilities.

Emily Lindsey started a new position as the Assistant Curator and Excavation Site Director at the La Brea Tar Pits and Museum.

Allison Stegner began a new postdoctoral position in the at University of Wisconsin, Madison where she will be researching abrupt ecological change in the 21st century.

Susumu Tomiya accepted a new postdoctoral position in the Department of Anatomy, Des Moines University, Des Moines, Iowa.

Student Awards, Honors & Updates

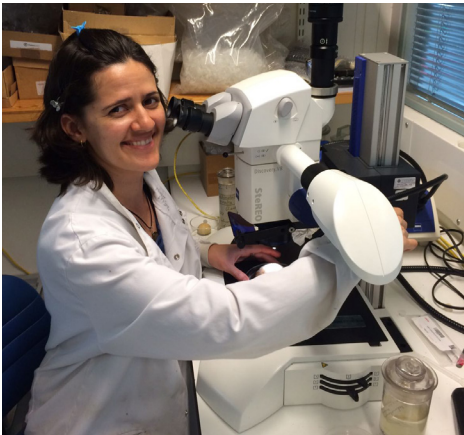
UCMP graduate students continue to shine as they receive awards, honors, and recognition for their research and public service. Through earnings from UCMP endowments, we are pleased to support graduate student training, research and fieldwork. We offer our congratulations to recipients of the 2016-17 UCMP fellowships, research, and travel awards, and to the many other ways in which UCMP graduate students have been honored.

Jeffrey Benca received a UCMP Fellowship supported by the Annie Alexander Fund to continue experimental studies testing how lycopsids respond to elevated ultraviolet-B radiation exposure. His research is evaluating the plausibility of ozone-weakening as a major driver in the collapse of the Earth's terrestrial biota in response to the end-Permian Siberian Trap volcanism.

Dori Contreras' dissertation research continues to take her to New Mexico for field sampling and census projects in Cretaceous plant assemblages in the McRae Formation of New Mexico. In addition to support from UCMP, Dori also received the George D. Louderback Award, for outstanding scholarship, excellence in research and contributions to the Department Community.

Sara ElShafie received support from the Anthony P. Barnosky Fund to visit critical collections at the Field Museum of Natural History, the Smithsonian NMNH and the Denver Museum of Nature and Science in

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Camilla Souto studying at the Naturalis Museum in Leiden. Photo by Camilla Souto



James Saulsbury (left) and Dori Contreras prospecting around a New Mexico site. Photo by Amy Pridonoff



Tesla Monson visiting the Konso walled city in Ethiopia. Photo courtesy of Tesla Monson



Sara ElShafie, Pixar Animator Austin Madison and Lisa White. Photo by Helina Chin

support of preliminary analyses of body size and ecology changes in fossil lizards and crocodylians during climate transitions. In the spring, Sara also organized a special artist talk from the Story Department at **Pixar Animation Studios** to discuss storytelling techniques and how they can be applied in science communication.

Tesla Monson received UCMP support to visit and survey the extensive extant primate collections at the Smithsonian NMNH for additional data collection on 10 *Artiodactyla* families. She presented part of her dissertation research at the International Congress of Vertebrate Morphology in Maryland. In 2016 she also received the Jerry O. Wolff Fellowship from the Museum of Vertebrate Zoology. Continuing her data collection, Tesla spent five weeks in Ethiopia looking at Pleistocene primate fossils at the National Museum in Addis Ababa.

Emily Orzechowski received a UCMP Fellowship (from the Annie Alexander Fund) and a Bill Berry Fund award to continue her research on controlled temperature and isotopic analyses of the gastropod *Callinax biplicata* for use in Quaternary paleotemperature and paleoenvironmental reconstructions in California. She was also honored with the Winifred Goldring Award from the Association of Women Geoscientists and the Paleontological Society in 2016.

Camilla Souto received a UCMP Fellowship from the Annie Alexander Fund to continue her research on irregular echinoids, *Cassiduloida* and *Spatangoida*. In summer and fall 2016 Camilla visited numerous museum collections in Europe including natural history museums in London, Paris, Leiden, Berlin and Vienna in support of her research. She also participated in the 3rd Latin-American Echinoderm Conference, where she presented on work with fellow Marshall Lab student **Lucy Chang** estimating echinoid diversity using

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What's New in the Collections

Diane M. Erwin met with other members of the NSF-sponsored Fossil Insect Collaborative Thematic Collection Network (FIC-TCN) for their annual meeting in early November at the Harvard Museum of Natural History and the Harvard Museum of Comparative Zoology in Cambridge, Massachusetts.

Diane presented to the group updates on the digitization of UCMP's fossil insect collections by the Berkeley Fossil Insect team, which joined the FIC-TCN as a Partner to an Existing Network in June, 2015 (<http://bfip.berkeley.edu/>).



At right: Dena Smith photographing the giant wing (13 inches!) of the fossil griffinfly *Meganeropsis americana* with members Christina Byrd (VMNH) (left), Susan Butts and Chris Norris (Yale) (right). At left Dena Smith (CU, now at NSF), David Zelagin (CU) and Diane Erwin (UCMP) look on. Photos courtesy of Diane Erwin

Staff Updates

Erica Clites organized two events to highlighting collections projects in celebration of National Fossil Day. On October 11th 2016, UCMP hosted 40 people at our secure off-campus Regatta facility to exhibit the results of an NSF grant to rehouse the former USGS Menlo Park collection, as well as an IMLS grant to curate the McKittrick tar seep fossils. Representatives from Point Reyes National Seashore, current and former USGS employees mingled with museum staff, curators, graduate students and friends of UCMP over light refreshments. Students who worked on the project returned to see the completion of their hard work! Next we hosted on National Fossil Day, October 12, an open house for Cal undergraduates interested in learning more about the museum and potential future employment opportunities.



Greg Wilson, Bill Clemens and Mark Goodwin in the field in Jordan, Montana.

Mark Goodwin spent about three weeks in Montana doing fieldwork with colleagues David Evans (Royal Ontario Museum) and **Greg Wilson** (Univ. of Washington) in the late Cretaceous Hell Creek Formation in eastern Montana. Mark joined Greg and crew in Jordon, Montana, and relocated and confirmed the stratigraphic occurrence of numerous UCMP pachycephalosaur localities. The localities were georeferenced and prospected for new fossils. One of the highlights was the discovery of a baby Triceratops squamosal bone from the frill that covers the neck. Mark also joined **Bill Clemens** and his daughter and geologist Diane



Clemens-Knott for five days in the Hell Creek Formation at Greg's camp. Mark and the Evan's crew also stayed at Dan and Lila Redding's farm along the Canadian border to prospect and map UCMP dinosaur localities in the Judith River Formation. Mark also penned a Memorandum of Agreement between the UCMP and the San Francisco Public Utilities Commission (SFPUC) to support the transfer, preparation and curation of fossils collected from the site of the SFPUC's new Calaveras Dam construction project. Numerous fossil whale skeletons, marine mammal bones and teeth, fish remains, shark teeth and mollusks from the Miocene Temblor Formation will be accessioned into the UCMP. This two-year project provides funding for two graduate students per semester and the summer, undergraduate assistants, a head fossil preparator/lab manager, and education & outreach activities.

Lisa White is PI on new one-year NSF Collections in Support of Biological Research (CSBR) grant to transfer the orphaned Kettleman Hills collection from San Francisco State Univ. to UCMP. Collected continuously by SF State students and faculty for more than 40 years, more than 9000 specimens are in the collection.

Ken Finger will oversee the rehousing of part of the USGS micropaleontology collection thanks to support from a Federal data preservation grant titled: Preparing the way for the transfer of the USGS Pacific Region's microfossil collections to the UCMP.



Top: Director Charles Marshall welcomes the group to the Regatta facility. Second: Senior Museum Scientist Pat Holroyd describes a fossil sea turtle to visiting scholar Julia Sigwart and Doug Clarke. Third: From left to right Museum Scientist Erica Clites, UCMP collections assistant Lillian Pearson, former undergraduate employees Anne Zavala and Gina Hwang and UCMP volunteers Don Pecko and (far right) Kathy Zoehfeld. These are just a few of the 6 graduate students, 15 undergraduate students, 2 part-time employees and 5 volunteers who worked on the USGS rehousing project! Photo credit: Jessica Bean; Fourth: Erica Clites gives a tour to students on National Fossil Day. All photos by Helina Chin unless otherwise noted.

Publications

- Barnosky A.D., E.L. Lindsey, N.A. Villavicencio,** J.E. Bostelmann, E.A. Hadly, J. Wanket, and **C.R. Marshall.** 2016. Variable impact of Late Quaternary defaunation in causing ecological state shifts in North and South America. *PNAS*. 113:856-861.
- Bean, J.R.** and G.J. Vermeij. *Califostoma*: A new genus of Neogene muricid gastropods from the northeastern Pacific and its relationship to the living South American genus *Crassilabrum*. *Vita Malacologica*. 15: 1-6
- Stevens, C.H. and **Clites, E.C.** 2016. Transfer of the Calvin H. Stevens coral collection to the University of California Museum of Paleontology, Berkeley, California: *Journal of Paleontology* v. 90, p.182
- Holden, A.R., **D.M. Erwin**, K.N. Schick and J. Gross. 2015. Late Pleistocene galls from the La Brea Tar Pits and their implications for cynipine wasp and native plant distribution. *Quaternary Research*, 84:358-367
- Goodwin, M.B.**, J.A. Nirody, **T. Huynh**, J.R. Horner, D.Y. Parkinson, R.C. Schott and D.C. Evans. 2016. Mapping and visualizing the complex internal anatomy of pachycephalosaur domes. Society of Vertebrate Paleontology 76th Annual Meeting Program & Abstracts, p. 145. Salt Lake City.
- Encinas, A., A. Folguera, V. Oliveros, L. De Girolamo Del Mauro, F. Tapia, R.F. Rizzo, Hervé, **K.L. Finger**, V.A. Valencia, G. Gianni, and Ó. Álvarez. 2016. Late Oligocene–early Miocene submarine volcanism and deep-marine sedimentation in an extensional basin of Southern Chile (~44°–46°S). The 7^o Latin American Congress of Sedimentology –CLS- and 15th Argentinean Meeting of Sedimentology –XV RAS–, Santa Rosa, Argentina, September, 2016.
- Finger, K.L.** 2016. Status of the UCMP microfossil collection and reference list of its primary types. *Micropaleontology*, 62(3): 221-272.
- Stadum, C.J. and **K.L. Finger**. 2016 Stratigraphy and paleontology of the Miocene Saddleback Valley limestone, southern California. Los Angeles County Museum of Natural History Contributions in Science, 524: 31–49.
- Finnegan, S.**, Rasmussen, C.M., Harper, D.A., 2016. Biogeographic and bathymetric determinants of brachiopod extinction and survival during the Late Ordovician mass extinction. *Proceedings of the Royal Society B* 283, 20160007.
- O'Dea, **Finnegan, S.**, et al, 2016. Formation of the Isthmus of Panama. *Science Advances* 2, e1600883.
- Smith, F.A., **Finnegan, S.**, et al, 2016. Body size evolution across the Geozoic. *Annual Review of Earth and Planetary Sciences* 44, 523-553.
- Hickman, C.S.** 2015. Paleogene marine bivalves of the deep-water Keasey Formation in Oregon, part III: The heteroconchs. *PaleoBios*. 32:1–44.
- Hickman, C.S.** 2016. New species of deep-water gastropods from the Indo-west Pacific Region (Gastropoda: Vetigastropoda: Seguenzioidae: Calliotropidae) with a geologic and biogeographic perspective. *The Nautilus*. 130(3):83–100.
- Hlusko, L.J.**, Schmitt, C.A., **Monson, T.A., Brasil, M.F.**, and Mahaney, M.C. 2016. The integration of quantitative genetics, paleontology, and neontology reveals genetic underpinnings of primate dental evolution. *Proceedings of the National Academy of Sciences*. 113(33):9262-9267
- Nicholson, D.B., **P. A. Holroyd**, P. J. Valdes, and P. M. Barrett. 2016. Latitudinal diversity gradients in Mesozoic non-marine turtles. *Royal Society Open Science* 3, 160581 <http://dx.doi.org/10.1098/rsos.160581>.
- Waterson, A.M., D. N. Schmidt, P. J. Valdes, **P. A. Holroyd**, D. B. Nicholson, and P.M. Barrett. 2016. Modeling the testudine climatic niche: a deep-time perspective. *Proceedings of the Royal Society B* 283: 20161408.
- Maguire, K.C.** and **P. A. Holroyd**. 2016. Pleistocene vertebrates of Silicon Valley (Santa Clara County, California). *PaleoBios* 33:1-14, ucmp_paleobios_31767
- Strait, S.G., **P.A. Holroyd**, C.A. Denvir, and **B.D. Rankin**. 2016. Early Eocene (Wasatchian) rodent assemblages from the Washakie Basin, Wyoming. *PaleoBios* 33:1-28, ucmp_paleobios_29986
- Klompaker, A.A.**, et al, 2016. Evolution of body size, vision, and biodiversity of coral-associated organisms: evidence from fossil decapod crustaceans in cold-water coral and tropical coral ecosystems. *BMC Evolutionary Biology* 16, 132.
- Klompaker, A.A.**, et al., 2016. Drill hole convergence and a quantitative analysis of drill holes in mollusks and brachiopods from the Triassic of Italy and Poland. *Palaeogeography, Palaeoclimatology, Palaeoecology* 457, 342–359.
- Klompaker, A.A.**, et al., 2016. Trace fossil evidence of coral-inhabiting crabs (Cryptochiridae) and its implications for growth and paleobiogeography. *Scientific Reports* 6, 23443.
- Klompaker, A.A.**, et al., 2016. Possible shell disease in 100-million-year-old crabs. *Diseases of Aquatic Organisms* 119, 91–99.
- Neto de Carvalho, C., Pereira, B., **Klompaker, A.A.**, Baucon, A., Moita, J.A., Pereira, P., Machado, S., Belo, J., Carvalho, J., Mergulhão, L., 2016. Running crabs, walking crinoids, grazing gastropods: behavioral diversity and evolutionary implications of the Cabeço da Ladeira Lagerstätte (Middle Jurassic, Portugal). *Comunicações Geológicas* 103, 39–54.
- Villegas-Martín, J., **Klompaker, A.A.**, 2016. Drill hole predation on tubes of serpulid polychaetes from the Upper Cretaceous of Cuba. *Palaeogeography, Palaeoclimatology, Palaeoecology* 455, 44–52.
- Brusca, R.C., **D.R. Lindberg** and W.F. Ponder. 2016. Phylum Mollusca. Pp.453-530 in R.C. Brusca, W. Moore and S.M. Shuster (eds.), *Invertebrates*. 3rd Ed., Sinauer Associates, Sunderland, MA
- Lyons S.K., J.H. Miller, D. Fraser, F.A. Smith, A.G. Boyer, **E.L. Lindsey**, A.M. Mychajliw. 2016. The changing role of mammal life histories in late Quaternary extinction vulnerability on continents and islands. *Biology Letters*. 12:20160342.
- Lipps, Jere H.** and Stanley, G.D. 2016. Photosymbiosis, past and present. Pp. 47-68, In D. Hubbard, C. Rogers, George Stanley, Jere H. Lipps (Eds). *Reefs at the Crossroads*. Springer Pub.
- Lipps, Jere H.** and Stanley, G.D. 2016. Reefs through time: An evolutionary view. Pp. 175-196, In D. Hubbard, C. Rogers, George Stanley, Jere H. Lipps (Eds). *Reefs at the Crossroads*. Springer Pub.
- DiMichele WA, **Looy CV**, et al. 2016. Megafloora and palynoflora, associated with a Late Pennsylvanian coal bed (Bursum Formation, Carrizo Arroyo, New Mexico, U.S.A.) and paleoenvironmental significance. *New Mexico Museum of Natural History and Science Bulletin*: Published online.
- Looy CV**, et al, 2016. Comparing biological and physical evidence for extreme seasonality in central Pangaea during the Permian. *Palaeogeography, Palaeoclimatology, Palaeoecology* 451: 210-226
- Lyons SK, **Looy CV**, et al., 2016. Temporal change in the organization of fossil assemblages: evidence from species co-occurrence patterns. *Nature* 529: 80-83.
- Neveling J, Gastaldo RA, Kamo SL, Geissman JW, **Looy CV** and Bamford MK, 2016. A review of stratigraphic, geochemical, and paleontologic data of the terrestrial of the end-Permian record in the Karoo Basin, South Africa. In: Linol B and de Wit M, Origin and evolution of the Cape Mountains and Karoo Basin, Springer, New York, pp. 151-157.
- Simon SST, Gibling MR, DiMichele WA, Chaney DS, **Looy CV** and Tabor NJ, 2016. An abandoned-channel fill with exquisitely preserved plants in redbeds of the Clear Fork Formation, Texas, USA: an early Permian water-dependent habitat on the arid plains of Pangaea. *Journal of Sedimentary Research* 86: 944-964
- Marshall, C.R.**, Quental, T.B. (2016). The uncertain role of diversity dependence in species diversification and the need to incorporate time-varying carrying capacities. *Philosophical Transactions B*, 371.
- Wang, S. C., **Marshall, C.R.** (2016). Estimating times of extinction in the fossil record. *Biology Letters*, 12(4).
- Pearson, L. K., E. C., Clites**, V. L. Santucci and R. W. Boessenecker. 2016. Protocols for paleontological site monitoring at Point Reyes National Seashore. *Natural Resource Report NPS/NRSS/NRR–2016/1185*. National Park Service, Fort Collins, Colorado.
- Pouost, AW.** 2016. First report of fossil turtle eggshell west of the Colorado Plateau. *Historical Biology* doi: 10.1080/08912963.2016.1189911

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* alumni

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Helina Chin and Nick Spano at the Natural History Museum of Utah

outreach materials. Postdoctoral Scholar **Jessica Bean** presented on the Understanding Global Change project.

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data from large databases.

Nick Spano was interviewed for a Time magazine article/obituary: Remembering the Holocene Epoch (August 2016, <http://time.com/4471327/holocene-epoch-end-anthropocene>). He spoke about changes in climate and species variation that help to define the end of the Holocene and beginning of the Anthropocene.

Larry Taylor received support from the UCMP Kellogg Fund to conduct isotopic analysis of modern barnacles from the California Academy of Sciences. This work is part of his dissertation research documenting the migratory behavior of mysticete cetaceans by reconstructing their migration routes through isotopic analysis of fossil coronulid barnacles.

SEE - THROUGH DINOSAUR SKULL



Crowdfunding

Baby Triceratops skull. Photo by Dave Strauss

By combining high resolution computed tomography (HRCT) scanning and 3D printing, we now have an opportunity to bring to life for the first time the inner workings of the interior of the smallest and youngest *Triceratops* yet known from the UCMP collections.

This 3D printed "see-through" skull, which we intend to put on display with the current *Triceratops* growth

series in the Marian Koshland Bioscience and Natural Resources Library of the Valley Life Sciences Building, will be the first "see-through" dinosaur skull anywhere!

Please support UCMP and the See Through Dinosaur Skull project through the UC Berkeley Crowdfunding Initiative. Thank you!

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Happy New Year!



UCMP was well represented in 2016 at conferences across the land. New grants and awards allow our staff and students

to continue their research and UCMP has an opportunity to make the first ever See-Through Dinosaur Skull. Visit [z](#) to see more about this project.

Take a look inside this issue to read more about our activities that you help support.

Keep up with UCMP News on our website, Facebook, Instagram and Twitter @ucmpberkeley!

Calendar of Events

Every 1st Wed. of the Month
East Bay Science Cafe
at Restaurant Valparaiso on Solano Ave. in Albany.
<http://scienceatcal.berkeley.edu>

March 4, 2017
UCMP Short Course
A New Look at Old Bones
Please join us for this short course focusing on new techniques in studying dinosaur fossils.

April 22, 2017
CalDay!
UCMP welcomes the community to learn about our collections and research on Cal Day! We'll have tours, Fun with Fossils and much more! calday.berkeley.edu

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