

SOCIETY OF
VERTEBRATE
PALEONTOLOGY
NEWS BULLETIN

Number 174, October 1998



© 1998, The Society of Vertebrate Paleontology

-- Official Business

NEW PACIFIC COAST REGIONAL EDITOR

We'd like to announce the appointment of a new Regional Editor for the Pacific Coast Region -- John Harris of the George C. Page Museum in Los Angeles, California. Three members volunteered to serve the Society as regional editor -- John Harris, Don Lofgren (Raymond Alf Museum, Claremont, California), and Steve Conkling (LSA Associates, Irvine, California). John was the first to respond to the announcement and his offer was accepted by Editor Dave Berman and President Lou Jacobs.

We thank John, Don, and Steve for their offers of assistance and ask all Pacific Coast members to send their news reports directly to John; his address and numbers are listed in the inside front cover.

-- New Members

Aase, Arvid K.
P. O. Box 101
Kemmerer WY 83101
(307) 828-3083
arvid_aase@nps.gov

Argyros, George
97 La Grange Street
West Roxbury MA 02132-3003
(617) 469-2572
f/(617) 469-2572
argyros@ibm.net

Bartlema, Lauri L.
905 Raynolds
El Paso TX 79903
(915) 568-7015
f/(915) 566-7458
BartlemaL@emh10.bliss.army.mil

Beck, Allison
Committee on Evolutionary Biology
1025 E. 57th St.
University of Chicago
Culver Hall, Room 402
Chicago IL 60637
(773) 363-4245

f/(773) 702-4699
albeck@midway.uchicago.edu

Blom, Henning
Institute of Earth Sciences
Dept. Historical Geology & Paleo.
NORBYVA Gen 22
Uppsala 5-75236
SWEDEN
46-18-471-2740
f/46-18-471-2749
henning.blom@pal.uu.se

Brainerd, Elizabeth L.
Biology Department, Morrill South
University of Massachusetts
Amherst MA 01003-5810
(413) 545-0957
f/(413) 545-3243
brainerd@bio.umass.edu

Calvano, Gino
8172 Kiner Ave.
Huntington Beach CA 92646
(714) 842-3790
foslhnd@concentric.net

Campbell, Carl
628 Waterford Ridge Ct.
Ballwin MO 63021
(314) 207-0572
f/(314) 909-0828

Cefalo, Ronald
673 South 400 West
Brigham City UT 84302
(435) 723-3158
f/(435) 734-4849
rcefalo@favorites.com

Clarke, Julia
Yale University, Dept. of Geology
Kline Geology Lab
P. O. Box 208109
New Haven CT 06520-8109
(203) 787-5687

f/(203) 432-3134
julia.clarke@yale.edu

Dasso, Joseph C., Jr.
22881 Caminito Plumas
Laguna Hills CA 92653
(949) 581-5202
f/(949) 586-4615
joedasso@earthlink.net

Davidson, Jane P.
2990 Cahal Ct.
Reno NV 89523
(702) 747-2252
f/(702) 784-6655
jdhexen@unr.edu

Davis, Marcus C.
University of Pennsylvania
Leidy Laboratories, Dept. of Biology
Philadelphia PA 19104-6018
(215) 898-0484
marcus@sas.upenn.edu

Delgado, Ricardo F.
15016 Westcliff Dr.
Sylmar CA 91342
(818) 526-4055
f/(818) 367-9422

Fox, Melissa D.
1430 Hawk Tree
College Station TX 77845
(409) 693-5841
f/(409) 693-5841
dinosaurL@aol.com

Ghedotti, Michael J.
Regis University
Department of Biology
3333 Regis Boulevard
Denver CO 80221
(303) 458-4091
f/(303) 964-5480
ghedotti@regis.edu

Gilpin, David M.
3734 S. Walden Way
Aurora CO 80013
(303) 690-7667
f/(303) 699-0242
paleonrd@idcomm.com

Gioppo, Nicholas A., III
125 N. Church St.
Bowling Green OH 43402
(419) 373-6069
ngioppo@bgnet.bgsu.edu

Goldberg, Patricia
708 Stag Trail
Edmond OK 73003
(405) 844-9370
pat_g@ou.edu

Hahn, Mark
155 N. Broad Street
Nazareth PA 18064
(610) 746-0792
chahn155@aol.com

Hill, Christopher L.
Montana State University
Museum of the Rockies
Bozeman MT 59717
(406) 994-5427
f/(406) 994-2682
chill@montana.edu

Hood, Sandra D.
515 Dove Court
Grand Junction CO 81503
(970) 241-8020
f/(970) 241-8040
whood@compuserve.com

Hurt, Ryan
1300 Wells Blvd.
Murray KY 42071
(502) 753-4653
ryan.hurt@murraystate.edu

Jagt, John W. M.
Dienst KCO
Natuurhistorisch Museum Maastricht
P. O. Box 882
NL-6200 AW Maastricht
The Netherlands
(+31) 43-350-5490
f/(+31) 43-350-5475
mail@nhmmaastricht.nl

Jones, Andy
P. O. Box 721020
Pinon Hills CA 92372
(760) 868-0012

Klein, James E.
1377 E. Windsor Road #317
Glendale CA 91205
(818) 507-5705
f/(818) 507-5705
kdpoptics@kdpoptics.com

Konertz, Marvin
178 Warehouse Rd.
Ringgold GA 30736
Logan, Ryan Fitzgerald
10 Stuart Road
Rochester MA 02770
(508) 763-2653
rlogan@ascc.carroll.edu

MacPhail, Rainn
8449 St. Joe Road
Fort Wayne IN 46835
(219) 481-6773
macphair@ipfw.edu

McCuan, Donald F.
2060 S. Franklin
Denver CO 80210
(303) 733-6518

McFarlane, Donald A.
The Claremont Colleges
Joint Science Department
925 N. Mills Ave.

Claremont CA 91711
(909) 607-2564
f/(909) 621-8588
dmcfarla@jsd.claremont.edu

Michalsky, Jay
Ralph B. Clark Interpretive Center
8800 Rosecrans Avenue
Buena Park CA 90621
(714) 670-8052
f/(714) 670-8074
jay.michalsky@lsa-assoc.com

Milam, Erika Lorraine
University of Michigan
Museum of Paleontology
1109 Geddes Rd.
Ann Arbor MI 48109-1380
(734) 647-7461
f/(734) 936-1380
emilam@umich.edu

Mongelli, Anthony, Jr.
Museum of the Rockies
Department of Paleontology
600 W. Kagy Blvd.
Bozeman MT 59517
(718) 982-3850
f/(718) 982-3852
59493F96@student.csi.cuny.edu

Montalvo, Claudia Ines
Teofilo de La Colina 651
Santa Rosa, La Pampa 6300
Argentina
0954-33079
f/0954-33079
overlord@cpsarg.com

Nieuwland, Ilja Jesse
Groningen University
History Department
P. O. Box 716
AS Groningen, NL-9700
The Netherlands
31-50-363-7253

f/31-50-363-7253
i.j.j.nieuwland@let.rug.nl

Nordin, Sabrina Lee
16049 Michelli Road
Independence LA 70443
(504) 878-9641
istu24696@selu.edu

Norris, Christopher A.
Museum of Natural History
Oxford University
Oxford OX1 3PW
United Kingdom
44-1865-272-962
f/44-1865-272-970
chris.norris@oum.ox.ac.uk

Olson, Dorothy L.
812 S. Holly St.
Denver CO 80246
(303) 329-0764

Oscarson, Damon B.
19 Montrose Point Road
Montrose NY 10548
(914) 737-8560
oscarson@oswego.edu

Phillips, George E.
P. O. Box 71
Artesia MS 39736
(601) 328-3390
f/(601) 328-3390
gep1@Ra.MsState.Edu

Radtke, Peter
Herbert-Boehme-Str.10B
Meissen 01662
Germany

Rayfield, Emily J.
University of Cambridge
Department of Earth Sciences
Downing Street
Cambridge

United Kingdom
44-0-1223-333-417
f/44-0-1223-333-450
eray@esc.cam.ac.uk

Sabol, Martin
Comenius University
Dept. of Geology & Paleontology
Fac. Nat. Sci.
Mlynska Dolina
Bratislava SK-84215
Slovakia
421-7-60296543
f/421-7-60296214
sabol@mic.fns.uniba.sk

Sakurai, Kazuhiko
Hobetsu Museum
80-6, Hobetsu
Hobetsu-cho, Hokkaido 054-0211
Japan
01454-5-3141
f/01454-5-3141
cxx03707@niftyserve.or.jp

Sanders, Richard
4125 Cherrystone Road
Choctaw OK 73020
(405) 391-3125

Schmolke, Edmond, Jr.
360 Barfield Drive
Jackson MS 39212
(601) 376-0938
Shipps, James C.
3780 Starflower Rd.
Castle Rock CO 80104
(303) 660-1418

Shoup, Ben E.
5150 Fowler Lane
Bozeman MT 59718
(406) 763-4743
f/(406) 582-0707
GBS3587@montana.edu

Sroka, Steven D.
University of Illinois at Urbana-Champaign
Department of Geology
Museum of Natural History
1301 W. Green St., 245 NHB
Urbana IL 61801
(217) 333-3833
f/(217) 244-4996
sroka@hercules.geology.uiuc.edu

Stefen, Clara
University of California
Museum of Paleontology
Berkeley CA 94720
(510) 642-1730
f/(510) 642-1822
claras@ucmpl.berkeley.edu

Tsentas, Costas
Box 55222
Bridgeport CT 06610
(201) 384-6152

Varhalmi, George J.
200 N. Hedges, Rm. 2043
Bozeman MT 59715
(406) 994-1322
durtddigger@hotmail.com

Walsh, Aaron Austin
39 Cleveland Road
Southsea, Portsmouth PO5 1SF
United Kingdom
01705-838-462
aaron.walsh@port.ac.uk

Wesley, Gina
University of Chicago
5419 S. Cornell, Apt.2S
Chicago IL 60615
(773) 752-7208
g-wesley@uchicago.edu

Wessels, Wilma
Institute of Earth Sciences
Budapestlaan 4

3584 CD Utrecht
The Netherlands
31-030-2535178
wessels@earth.ruu.nl

Williams, Terry F.
19 Raynham Way
Wigmore Park
Luton, Bedfordshire LU2 9SH
United Kingdom

Wilson, Gregory Philip
2915 Shattuck Avenue
Berkeley CA 94705
(510) 845-2941
gpwilson@socrates.berkeley.edu

-- Address Changes --

Alroy, John
University of California
NCEAS
735 State Street, Suite 300
Santa Barbara CA 93101-3351
(805) 892-2519
f/(805) 892-2510
alroy@nceas.ucsb.edu

Ambrose, Peter
USDA Forest Service
2250 Hwy. 50
Delta CO 81416
(970) 874-6638
f/(970) 874-6698
pambrose/r2_gmug@fs.fed.us

Angielczyk, Kenneth D.
University of California, Berkeley
Museum of Paleontology
1101 Valley Life Sciences Bldg.
Berkeley CA 94720-4780
(510) 643-2109
etranger@socrates.berkeley.edu

Badgley, Catherine

University of Michigan
Museum of Paleontology
Ann Arbor MI 48109-1079
(734) 763-6448
f/(734) 936-1380
cbadgley@umich.edu

Beck, Allison
Committee on Evolutionary Biology
1025 E. 57th St.
University of Chicago
Culver Hall, Room 402
Chicago IL 60637
(773) 363-4245
f/(773) 702-4699
albeck@midway.uchicago.edu

Bell, Cynthia S.
1807 W. Falcon Dr.
Chandler AZ 85248-3069
(602) 785-2670
voyager3@msn.com

Bertog, Janet
P. O. Box 570
Hagerman ID 83332
bertogjl@email.uc.edu

Brown, Garry
15 Handforth Rd., Flat A
London SW9 0LL
United Kingdom
0044 01372 744 586
Gary.BROWN@fina.be

Burton, Jeremiah J.
34 USU Aggie Village Apt. G
Logan UT 84341
(435) 797-6627
sllfw@cc.usu.edu

Clouthier, Shawn G.
5383 Boland Dr.
Grand Blanc MI 48439-5101
(517) 485-8116 x42
clouthie@pilot.msu.edu

Davis, Paul G.
University of Portsmouth
69 Sharpe St.
Amington
Tamworth, Staffs B77 3HZ
United Kingdom
44-181-541-9231
davis@geology@surreycc.gov.uk

Dawes, Steven
1031 Division Rd. East
Fort Shaw MT 59443
(406) 467-2073
gsd1735@trex2.oscs.montana.edu

DeNooyer, Cathrin
104 Cochise Trail #219
Lafayette IN 47905
(765) 449-2580
denooyer@eas.purdue.edu

Digweed, Shannon M.
8927 81st Avenue
Edmonton AB T6C 0W7
sdigweed@gpu.srv.ualberta.ca

Dirks, Wendy
New York University
Department of Anthropology
25 Waverly Place
New York NY 10003
(212) 998-3809
f/(212) 998-8581
wqd6424@is2.nyu.edu

Fernandez, Marta S.
Mus. de La Plata, Paleo. Vert.
Paseo del Bosque
1900 La Plata
Argentina
54-21-234921
f/54-21-257527
darrigra@way.com.ar

Freedman, Jane L.

364 Colony Key Circle
Atlantis FL 33462
(561) 967-2799

Furusawa, Hitoshi
Cultural Affairs, Sapporo City Hall
Sapporo Museum Project
N1 W2 Chuo-ku, Sapporo 060-8611
Japan
81-11-211-2261
f/81-11-218-5157
hitoshi.furusawa@city.sapporo.jp

Gillette, J. Lynett
3567 Antiem St.
San Diego CA 92111
(619) 268-3140
f/(619) 694-0387

Girard, Thomas M.
11271 E. Alameda Ave., Apt.15
Aurora CO 80012-1005
Gould, Gina
Box 44
Tully NY 13159
(315) 696-8373
gcg@a-znet.com

Green, Cliff
492 East 200 South, #2
Provo UT 84606
(801) 375-2146

Hamilton, Harold
265 Crest Ave., Apt. 1
Belle Vernon PA 15012
(724) 930-8315

Hubiak, Leann M.
819 Robin Hood Trail, Apt. #1
Statesboro GA 30458
leann_m_hubiak@gasou.edu

Keimig, Alan A.
Denver Museum of Natural History
Department of Earth Sciences

2001 Colorado Blvd.
Denver CO 80205-5798
(303) 852-3269
f/(303) 331-6492
alan-a-k@Juno.com

Kiernan, Caitlin R.
#303 Liberty Hse, 2301 1st Ave. S.
Birmingham AL 35203-4320
(205) 714-9941
f/(205) 714-9941
cait@gothic.net

Kilroy, William Paul
153 Turkey Creek
Alachua FL 32625
(904) 418-3787

Krulik, Katherine Wolfram
6407 Hampton
Amarillo TX 79109

Lamm, Ellen-Therese
Montana State University
Museum of the Rockies
Bozeman MT 59717
(406) 994-2682
ellen@iggy.oscs.montana.edu

Laurin, Michel
Equipe á Formations Squelettiques
Laboratoire dd'Anatomie Comparée
Case 7077, Universite Paris 7
2 Place Jussieu
Paris 75005
France
01-44-27-36-92
f/01-44-27-56-53

Leiggi, Patrick
Montana State University
Museum of the Rockies
Bozeman MT 59717
(406) 994-3983
f/(406) 994-4030
pleiggi@montana.edu

Lemelin, Pierre
Duke University Medical Center
Dept. of Biological Anthro. & Anat.
Box 3170
Durham NC 27710
pl1@riker.neoucom.edu

Loewen, Mark
1927 South 1900 East
Salt Lake City UT 84108
(909) 796-1016
mnloewen@aol.com

Mason, William H., III
Uncommon Conglomerates, Inc.
400 Western Avenue North
Saint Paul MN 55103
(612) 227-7000
f/(612) 227-6526

McNeil, Lana S.
P. O. Box 1082
Elko NV 89803-1082
lana.mcneil@yale.edu

Miller, Ellen
Univ. of North Carolina-Chapel Hill
Dept. of Anthropology
301 Alumni Bldg., CB 3115
Chapel Hill NC 27599-3115
miller@unc.edu

Mongelli, Anthony, Jr.
Museum of the Rockies
Department of Paleontology
600 W. Kagy Blvd.
Bozeman MT 59517
(718) 982-3850
f/(718) 982-3852
59493F96@student.csi.cuny.edu

Nystrom, Clifford L.
901 South 17th Street
Grand Forks ND 58201-4242
(701) 772-8038

clnystrom@hotmail.com

Organ, Chris
Montana State University
Museum of the Rockies
Department of Paleontology
Bozeman MT 59717
(406) 994-3170
organ@montana.edu

Ostrom, John H.
Yale University
Peabody Museum/Dept. of Geology
170 Whitney Ave.
New Haven CT 06520-8118
(203) 432-3761
f/(203) 432-5668
aus@hess.geology.yale.edu

Patrick, Randy R.
9882 North 100 East
Roachdale IN 46172
(765) 522-1774
rpatrick@indy.tds.net

Ralrick, Patricia E.
100 Johnstone Hall, Room 305
Bozeman MT 59715-5076
(406) 994-4438
pattyralrick@hotmail.com

Ribolzi, Randy
310 W. Florence Street
Oglesby IL 61348
(630) 859-6136

Rogers, Jack V., II
8277 Southwestern, Apt. 1087
Dallas TX 75206
(214) 768-2770
st_rogers@tarleton.edu

Rosenberg, Robert S.
2135 Silver Linden Lane
Buffalo Grove IL 60089
(847) 634-4000

rosenberg@district125.k12.il.us

Rubilar, David
Universidad Austral de Chile
Instituto de Geociencias
Casilla 567
Chile
56-63-221372
f/56-63-221372
drubilar@smtp.uach.cl

Sanchez-Villagra, Marcelo
Universität Tübingen
Lehrstuhl Zoologie
Auf der Morgenstelle 28
D-72076 Tübingen
Germany
msanchez@acpub.duke.edu

Schubert, Blaine W.
Illinois State Mus, Research & Collns
1101 E. Ash Street
Springfield IL 62703
(217) 785-4844
schubert@museum.state.il.us

Shin, Mariette
544 I Street
Davis CA 95616
(530) 758-6725
f/(916) 978-5292
manya@ix.netcom.com

Shoup, Ben E.
5150 Fowler Lane
Bozeman MT 59718
(406) 763-4743
f/(406) 582-0707
GBS3587@montana.edu

Smith, Jason D.
P. O. Box 181
Como CO 80432
(303) 216-2253

Sugimoto, Shino

1600 North 1575 West, Apt. C-202
Layton UT 84041
(801) 779-1693
f/(801) 779-1693
dinochaser@aol.com

Thomson, Keith S.
Oxford University
Museum of Natural History
Parks Road
Oxford OX1 3PW
United Kingdom
011-44-1865-272959
f/011-44-1865-272970
keith.thomson@oum.ox.ac.uk

Tsentas, Costas
Box 55222
Bridgeport CT 06610
(201) 384-6152

Viranta, Suvi
Howard Univ. College of Medicine
Dept. of Anatomy, Lab of Evol. Bio.
520 W St. NW
Washington DC 20059
(301) 610-0907
suvi.viranta@helsinki.fi

Weasma, Ted R.
Mojave National Preserve
202 East Main, Suite 210
Barstow CA 92311
(760) 255-8821
f/(760) 255-8809
tweasma@or.blm.gov

Wheeler, Richard F.
2312 Walgrove Avenue
Los Angeles CA 90066
pitboss@gte.net

Wilson, Gregory Philip
2915 Shattuck Avenue
Berkeley CA 94705
(510) 845-2941

gpwilson@socrates.berkeley.edu

Wright, Robert T., Jr.
Verner, Liipfert, et al.
200 S. Biscayne, Suite 3100
Miami FL 33131
(305) 371-9788
f/(305) 371-6545
rtwjr1@aol.com

Zetkus, Susan
American Museum of Natural History
Dept. of Vertebrate Paleontology
Central Park West at 79th Street
New York NY 10024
(212) 716-6281
f/(212) 867-7652
zetkus@ecunet.org

-- **News from Members**

BOLIVIA

Museo Nacional de Historia Natural, La Paz (pal@mnhn.rds.org.bo)

Our department chief, Federico Anaya, returned from Japan in March. He had worked from last December through March at the Primate Institute of the University of Kyoto. There he studied some platyrrhine fossils with Dr. Takai. Federico co-authored a couple of abstracts with his colleagues in Japan. These were ultimately published in Japanese, thus earning him the distinction of having authored something he can't read. Upon his return he and Juan Tarqui went to southern Bolivia with Richard Kay and Rick Madden of Duke University where they prospected some Paleogene exposures. While in the Department of Potosi, they wandered into the Cretaceous and found some nice dinosaur tracks.

In July and August, Federico worked with Christian Meyer (University of Basel) at a huge dinosaur footprint locality near Sucre. They mapped over 185 distinct trackways, composed of hundreds of footprints. Meyer called the site the eighth wonder of the world. Martin Lockley of the University of Colorado and Josepe Leonardi of Italy also inspected this large site.

Bruce J. Shockey and Juan Tarqui completed a xenarthran exhibit which includes the displays of an Oligocene armadillo carapace, several Miocene to Pleistocene sloth skulls, the partial skeleton and carapace of a pampathere, and the osteoderms, tails, and skulls of several glyptodonts. Shockey also submitted a paper on the postcranial osteology of

litopterns of Salla (to *JVP*), a report of some Paleogene notoungulates from Peru (with Hitz and Bond to *Contributions in Science*), and a review of the La Venta volume which will be published in the *Journal of Biogeography*.

The entire crew got involved in producing a large exhibit which has been displayed in various plazas throughout La Paz. We were surprised by the enthusiastic response from the public. We had over 500 inquisitive visitors each day.

The **big news** is that we will host the international congress Evolucion Neotropical del Cenozoico in La Paz on 19-23 May 1999. Field excursions are planned before and after the meeting. The participants of the excursions will be treated with traditionally prepared llama steaks (low in cholesterol). Please see our ad in this issue of the *SVP News Bulletin*. For more information, please e-mail us at: pal@mnhn.rds.org.bo or write to: Museo Nacional de Historia Natural, Calle 26 Cota Cota s/n, Casilla 8706, La Paz, Bolivia. (Bruce Shockey)

CANADA

Canadian Museum of Nature

Xiao-Chun Wu, new CMN Research Associate, Anthony Russell (University of Calgary), and Steve Cumbaa have submitted a manuscript on a reasonably complete, 6-m long *Teleorhinus* specimen found by Tim Tokaryk (Royal Saskatchewan Museum) and Steve in early Turonian deposits along the Carrot River, Saskatchewan. Steve is working on selachian and other marine fossils from the underlying Cenomanian deposits. Steve is also working on Quaternary fish fossils from the Don Formation in Toronto with Kevin Seymour (ROM), from Champlain Sea deposits at St. Nicholas, Québec, with Michel Chartier and Martin Dubreuil (Université de Montréal), and from early Pleistocene deposits along the Porcupine River, Yukon, with Bernard Lauriol (Université d'Ottawa). He is continuing, with Hans-Peter Schultze (Museum für Naturkunde, Berlin), the study of early bony fishes and their paleoenvironment from Lower Devonian deposits along the Anderson River, Northwest Territories. Work on the ceratopsian continues: Cathy Forster (suny, Stonybrook), who is describing the dinosaur with Rob Holmes, recently spent a week at the CMN examining the specimen. Kathy Stewart and Alison Murray are continuing their work on the alestiid fishes of East Africa. (Alison Murray)

Royal Ontario Museum

Hans Sues has been busy with various projects on reptiles and therapsids from the Late Triassic strata of the Newark Supergroup. Post-doc Patrick Spencer has been working with him for several months on a phylogenetic analysis of procolophonoid parareptiles, and David Dilkes just started work on a detailed study of the enigmatic archosauromorph *Doswellia*. (Hans Sues).

FRANCE

Laboratoire de Paléontologie, Muséum National d'Histoire Naturelle, Paris

In January, three colleagues from the University of Paris VI have joined our staff and moved to the Laboratoire de Paléontologie of the mnhn: Nathalie Bardet, Emmanuel Gheerbrant, and Jean-Claude Rage. Furthermore, since the beginning of the year Philippe Janvier has replaced Philippe Taquet in the heavy task of heading our Laboratory.

Philippe Janvier has very little time for scientific activities, as he is now busy with most exciting bureaucratic tasks! Nevertheless, he was in the field in Vietnam in November 1997, together with Art Boucot (Corvallis, Oregon) and his Vietnamese colleagues Tong Dzuy Thanh and Ta Hoa Phuong. They excavated the newly discovered Silurian fish locality of My Duc (central Vietnam), which yields placoderms and sarcopterygian remains and discovered several new fish (antiarchs, arthrodiros, sarcopterygians) localities in the Middle Devonian Ly Hoa sandstones of the same area. Further north, in the Haiphong area, they discovered evidence for Late Silurian or Early Devonian fishes at the base of the Do Son Sandstone Formation. In connection with these discoveries, Philippe has recently been working with Yu Xiaobo (Kean University, New Jersey), who was invited professor at the Paris museum in May and June 1998. They both tried to understand the relationships of the "weird" Early Devonian sarcopterygian *Psarolepis romeri* from Yunnan (and now Vietnam). Beside this Asian material, Philippe is also working on a new Late Devonian fish fauna from Colombia.

Nathalie Bardet (bardet@mnhn.fr) carries on her work on Late Cretaceous marine reptile faunas from Europe and has recently diversified her research program with contemporaneous faunas from North Africa and the Middle East. Paleobiogeographical and biostratigraphical studies based on the comparisons of northern and southern tethysian margin marine reptile faunas are currently in progress. Preliminary results on this topic were presented during the Palaeodiversification Symposium (Lyon, July 1998). Within marine reptile faunas, Nathalie's work is mainly focused on mosasauroids. A first description of mosasaur remains from the Basque Country (with Xabier Pereda Suberbiola and Carmelo Corral from Vitoria-Gasteiz) has been published in *Geobios*. A study of *Prognathodon giganteus* from Champagne (with Reims and Paris 6 universities colleagues) has appeared in the *Revue de Paléobiologie*. Finally, mosasauroid from Touraine (with X. Pereda Suberbiola and the fossil collector) will soon appear in *Géologie de la France*. Since the historical review of the "Grand Animal fossile de Maastricht" (*Bull. Mus. Nat. Hist. Nat.*), Nathalie has greatly appreciated working with her colleague John W. M. Jagt (Maastricht) so that other collaborations have been done (shark tooth marks on the *Plioplatecarpus* vertebrae published in the *Natuur. Genoot. Limburg*) or planned. Even if a great part of her work is now devoted to Late Cretaceous marine reptiles, Nathalie has not given up the study of Late Jurassic marine reptiles. Recently discovered *Ophthalmosaurus* remains from northern France have been described with numerous contributors in *Neues Jb. Min. Pal. Abh.* Other contributions on both plesiosaurs and ichthyosaurs from this period are currently in progress with usual collaborators (and friends!) Pascal Godefroit (Bruxelles), Zulma Gasparini, and Marta Fernandez (La Plata). Diving in the Triassic now, a new marine vertebrate fauna from Provence (the outcrop is located just a few kilometers from Nathalie's family house!) is

currently under study in collaboration with several colleagues. The first results were presented during the Third Workshop on Vertebrate Palaeontology (Maastricht, May 1998).

Vera Eisenmann is still involved with Equids. A paper on mandibular morphologies in browsing and grazing equids compared to tapirs has been published in *Géobios*. The description of two species of *Hipparion* from Balta (Turkey), in collaboration with P. Sondaar, will be published soon, as a chapter of a monograph on this locality (*Géodiversitas*, mnhn). A description of some remains of a small ass of Binagady (Azerbaijan), in collaboration with M. Mashkour, is in press (*Géobios*). A wonderful stay in South Africa (mostly Florisbad and Cape Town) was an opportunity to look at local equids and initiate a collaboration with J. Brink. The renovation of some exhibits, in particular equids, in our old Gallery of Paleontology has also kept her busy. Please note the extended e-mail and address: vera@mnhn.fr; Dr. Vera Eisenmann, ura 12 du cnrs, Laboratoire de Paléontologie, 8 rue Buffon, 75005 Paris, France. Tel: 33 01 40 79 30 22. Fax: 33 01 40 79 35 80. Home: 33 01 43 83 69 49.

Emmanuel Gheerbrant (gheerbra@mnhn.fr) led a new field party this year in the Ouled Abdoun phosphate basin (Morocco) with J. Sudre, H. Cappetta (University of Montpellier), S. Iarochéne (Ministère de l'Energie et des Mines, Rabat), and with the help of the Office Chérifien des Phosphates. Among other vertebrates, new material of mammals, exemplifying several taxa, have been recovered, including skull and lower dentition of *Phosphatherium escuilliei*. The detailed study of *P. escuilliei* upper dentition has appeared this year in *Géobios* (1998, 30(2):247-249) and a short review of the paleobiogeographical context of the discovery of the species in Africa is published in *Bull. Soc. Geol. Soc. of Denmark* (1998, 44:181-185). New data on the age of the mammal levels have been also obtained -- we are working together with Jean and Henri on a review of the mammal localities, their preliminary faunal list, and their stratigraphical context. In collaboration with J. L. Hartenberger, a study of a new insectivore from the Early Eocene of Chambi (Tunisia), known by a maxilla with P⁴-M³, should appear in *Paläontologische Zeitschrift*. The species shows primitive features but seems more closely related to lipotyphlan erinaceomorphs than to archaic insectivores (Proteutheria). A new paper (with J. Sudre and S. Sen, among others) on the vertebrates localities from the Ouarzazate Basin, reporting results of two last field campaigns, has been completed this year. It adds new data on the mammals from the Thanetian of Adrar Mgorn and from the Ypresian of N'Tagourt 2, and new magnetostratigraphical and biostratigraphical data. Emmanuel is also involved in the study of the locality of Creil discovered by G. de Ploeg in the "Sparnacian" of the Paris Basin. Excavations in progress have yielded an extraordinarily rich biotic material which makes this locality one of the best representatives of Early Paleogene paleocommunities: a true "fossil-Lagerstätten." It includes a rich fossil flora (pollen and macrofossils, even flowers in amber), an extraordinary insect community preserved in amber (studied by A. Nel), and a rich vertebrate fauna including well-preserved mammal remains which will be studied in collaboration with M. Godinot. A preliminary report has been presented in Paris during a recent symposium devoted to the Paleocene/Eocene boundary in Europe and is published in *Strata* (1998, 9:108-110).

Daniel Goujet has been involved in the acid preparation of new material of *Romundina* collected in the Canadian Arctic in 1995. It completes the information on the cheek plates and body armour of these strange placoderms. He has been very busy with the European program on systematics collections. The European community has recognized the biological (and paleontological) collections as a large-scale facility for European researchers, and Daniel is in charge of coordinating the whole program. In parallel, he is participating in the igcp 406 program "Circum-Arctic Vertebrate Correlation" which will have its annual meeting in Warsaw in early September.

Christian de Muizon has carried on his works on early marsupials. His monograph on *Mayulestes* from the early Paleocene of Tiupampa (Bolivia) has been published in *Geodiversitas* (mnhn). A biomechanical study, in progress by Christine Argot (a student of Christian), confirms the arboreal abilities of *Mayulestes* and *Pucadelphys* (although to a lesser extent in the latter). The work of Christine is based on a detailed analysis of the anatomy of the living arboreal didelphid, *Caluromys*, (as well as other arboreal, semiarboreal, and terrestrial taxa: *Didelphis*, *Marmosa*, *Micoureus*, *Monodelphis*, and *Metachirus*) and on cineradiographies of specimens of the *Caluromys* husbandry of the Ecology Laboratory of the mnhn. A preliminary note (with R. Cifelli and R. Céspedes) on the *Andinodelphys* skulls and skeletons found in the same locality was out in *Nature* in October 1997, and its conclusions contradict the hypothesis of close relationships between borhyaenoids and deltatheroidans as previously suggested by other authors. The latter interpretation is also broadly debated in a larger paper on borhyaenoid phylogeny now in press with *Géobios*. Several other papers with R. Cifelli on North American marsupials (*Kokopellia*, *Alphadon*) and on Tiupampa eutherian foot bones have been published (*Journal of Mammalian Evolution*, *Journal of Paleontology*) or are in press (*JVP*). In January, Christian invited Steve Wroe, (University of New South Wales), a Ph.D. student of M. Archer, to spend ten days in Paris in order to have a look at the Tiupampa marsupial skulls. This visit was important since Steve was, at that time, finishing his dissertation on dasyuroid evolution and the observation of the oldest known American and Gondwanian marsupial skulls allowed him to include them in his character matrixes and cladograms. This visit was an opportunity for fruitful discussions and exchange of ideas on South American and Australian marsupial evolution and relationships. Christian was impressed by Steve's knowledge and competence; he certainly is one of the great hopes of a new generation of students on fossil marsupials. In May, Rich Cifelli was visiting again our laboratory as a "Professeur associé." Christian and Rich worked on new condylarths from the Tiupampa fauna and prepared a pretty fat monograph (submitted to *Géodiversitas*) on their relationships which, not surprisingly, are with both North American mioclaenids and South American didolodontids. Finally, in August, Christian visited Dino Frey (Staatliche Museum für Naturkunde in Karlsruhe, Germany) who invited him to study some exceptional and astonishing specimens of the walruslike dolphin *Odobenocetops* from the Pliocene of Peru. These skulls will be his priority when he returns from his yearly field season at Tiupampa (Bolivia) in September-October.

Xabier Pereda Suberbiola is associated to the Laboratoire de Paléontologie and spends his time between the Paris Museum and the Universidad del País Vasco of Bilbao. He carries

on working on ornithischian dinosaurs of Europe: his latest papers deal with a revision of armored material from the Upper Cretaceous of Transylvania (together with Peter M. Galton), published in the Romanian journal *Sargetia* (Proceedings of the Deva Symposium on Mesozoic Vertebrate Faunas of Central Europe, 1996, vol. 17), and a systematic review of the ankylosaurian remains from the mid-Cretaceous of England, in collaboration with Paul M. Barrett (Cambridge), to be published in the Palaeontological Association Special volume on Cretaceous Fossil Vertebrates. He has also collaborated with Lourdes Casanovas and Pepe Santafé (Sabadell) in a synthetic work on the stegosaurian material from Valencia, Spain, (to be soon published in the *Revista Española de Paleontología*) and a revision of hadrosaurs from the Catalanian Pyrenees (currently in progress). During summer 1997, Xabier took part on the VI Cursos de Paleontología de Cuenca (Spain) on Iberian dinosaurs, organized by J. L. Sanz and Bernardino Pérez Moreno, and spent two weeks at the rich locality of Laño (Treviño) in the search of dinosaurs, pterosaurs, crocodylians, turtles, and other vertebrates. Xabier greatly appreciates the financial support for fieldwork by the Dinosaur Society. Moreover, he very much enjoyed trailing the activities of the eccentric Baron Nopcsa on European dinosaurs. An overview on Nopcsa's studies about Late Cretaceous vertebrate faunas was published in *Gaia* (1996, vol. 13) in Spanish. Together with Prof. Philippe Taquet, a study of some ornithopod remains from Transylvania (a present of Nopcsa to the Muséum of Paris) is to be published in *Géodiversitas*. Finally, Xabier has also been working with Xabier Murelaga and Humberto Astibia (Bilbao) on Tertiary vertebrate faunas of the Basque Country. Many works on the Eocene-Oligocene localities of Alava and the lower Miocene of Navarre are currently in preparation (together with other colleagues of Paris, Madrid, and Sabadell).

Martin Pickford and Brigitte Senut have been running active field expeditions to Namibia, South Africa, and Uganda in the Neogene fossiliferous deposits. Of particular interests in Namibia and South Africa are the coastal deposits, fluvial terraces, and aeolianites, all of which are highly fossiliferous. The ages of the various diamondiferous beach deposits of the Namib on the basis of biochronology range in age from Early Miocene to Late Pleistocene, a finding with considerable economic implications. The first Hominoidea from the Early Miocene from Ryskop, Namaqualand, has been published (in collaboration with D. Wessels). It recalls the morphology seen in Kenyapithecids from East Africa. This find suggests that as early as the Lower Miocene, the superfamily had a pan-African distribution. The associated fauna, close to that from Rusinga (Kenya) shows that a tropical climate was present. We also relocated the Areb site which yielded the holotype of *Notohipparion*. The first monograph on the Namib desert (by Martin and Brigitte) focused on the geology is in press.

During the last field season of the Namibia Palaeontology Expedition, the team had the great fortune to be handed the calotte of an archaic *Homo sapiens* which had washed out of the Orange River during the great flood of 1988. The specimen was found by Daan Marais, who kept it at his home. This specimen will throw a great deal of light on the cranial anatomy of late "archaic" *Homo sapiens*, because it is extremely well preserved. The Otavi karst field continues to yield important quantities of fossil material ranging in age from Middle Miocene to Holocene. Brigitte completed a study on the springing

adaptations in springhares of Arrisdrift (Middle Miocene, Namibia) and showed that the pedetids of this site had different proportions from both the modern and East African Miocene specimens. They are heavier and more stable than modern *Pedetes*. The study of the macroselidids from Arrisdrift from the Neogene of the Sperrgebiet is in process and should be completed by the end 1999. The *Otaviipithecus* postcranials have been published (in collaboration with D. Gommery); they confirm that this Middle Miocene Hominoidea was arboreal, at least for part of the time. In Uganda the focus has shifted from the Albertine Rift to the east of the country, and the team (M. Pickford, B. Senut, and D. Gommery from the Paris Museum) is currently excavating at Bukwa, an Early Miocene site on the northeast slopes of Mount Elgon. Preliminary results are encouraging, with abundant terrestrial gastropods and mammals being recovered. During a reorganization of the collections at the Uganda Museums in Kampala, remains of fossil apes from Napak found by Bishop in the 1960s have been rediscovered! Their study is in press; they show that in the Early Miocene, at least two apes were present at Napak: *Proconsul major* and a smaller taxon. We studied the *Morotopithecus* material and showed that the scapula fragment does not belong to an arboreal primate, but to a nonprimate terrestrial quadrupedal large mammal. On faunal correlations, we challenged the date of 20.6 Ma for the site of Moroto, based on an altered lava: the site would be 15-17 million years old. Martin Pickford continued his long-term collaboration with Prof. H. Ishida of Kyoto University, Japan. The two of them described the first decently preserved large hominoid remains from the Late Miocene of Africa, *Samburupithecus kiptalami*, from Namurungule, Kenya, aged 9.5 Ma. This genus is morphologically closer to modern African apes and humans than any of the Eurasian Late Miocene hominoids. In 1997, Martin Pickford visited Tbilisi, Georgia, to study fossil Suidae and Hyracoidea and had the good fortune to meet Leo Gabunia and Abesalom Vekua, both of whom are still active in the field and lab. A younger generation of paleontologists, including Dato Lordkipanidze, is keeping up the paleontology tradition in Georgia. There is tremendous potential in this small country sandwiched between the North and South Caucasus.

Cecile Poplin est toujours très occupée avec les actinoptérygiens paléoniscoïdes. Il y a d'abord ceux du Carbonifère supérieur (Mississipien) de Bear Gulch (Montana, USA). Après avoir présenté au colloque sur les Paléodiversifications à Lyon (6-8 juillet 98) une première synthèse sur la paléoécologie de ces poissons, sa collaboration avec Dick Lund se poursuit par la préparation de nouvelles descriptions avec étude cladistique à l'appui. Le séjour de Dick à Paris pour trois mois à partir de septembre 1998 devrait accélérer les résultats. Il y a ensuite la reprise active, et très attendue, du matériel de nodules stéphaniens de Montceau-les-Mines (Massif central): responsable de cette collection (200,000 nodules environ!) que le Muséum de Paris a déposée au Musée d'Autun, Cécile coordonne un énorme travail d'inventaire, de rangement et de dégagements avec D. Sotty (inventeur de la collection) et D. Chabard, Directeur du Musée d'Autun. De nouvelles formes de poissons (acanthodiens, chondrichthyens, actinoptérygiens, et, qui sait!, sarcoptérygiens) et de tétrapodes (surtout branchiosaures) sont espérées, sans parler de nombreux invertébrés terrestres et aquatiques remarquablement conservés. Enfin l'Autunien de Buxières-les-Mines, fouillé par l'association bénévole Rhinopolis, a livré, outre de fort beaux xénacanthidés et tétrapodes, quelques nouvelles formes de paléoniscoïdes: Cécile vient d'en décrire une très proche d'un fossile contemporain de

Bohême (manuscrit a *Géodiversitas*). La suite de l'étude de ces actinoptérygiens se fera en collaboration avec Stanislav Stamberg (République Tchèque).

Jean-Claude Rage (jcrage@mnhn.fr) tried to focus his research on squamates from the mid-Cretaceous. Foremost was the completion of an article on the oldest snake fauna (the Cenomanian) from Sudan, with Christa Werner (Berlin); the paper was submitted to *Palaeontologia africana*. Two articles on a new Cenomanian lizard (with D. Néraudeau) and on the still poorly known snake *Simoliophis* (with D. Pouit) are near completion. He is still involved in the study of the Paleocene snakes from Brazil: he is putting the finishing touches on the second part (Boidae), while the first part (Aniliidae and Madtsoiidae) should appear soon in *Palaeovertebrata*. He has been asked to study various herpetofaunas which range from the Eocene to the latest Miocene. Jean-Claude attended the Third World Congress of Herpetology in Prague where he presented three talks (Sylvain Duffaud, Marc Augé, and J. Sébastien Steyer were there also). Among papers recently published are the description of the only non-Gondwanan madtsoiid snakes (*C. R. Acad. Sci. Paris*, 1996), a preliminary study of the rich and diverse Eocene herpetofauna of Prémontré (multi-authored; *Géologie de la France*, 1997), and reflections on the evolution of the suspensorial apparatus of macrostomatan snakes (Delsol Festschrift, 1997).

Don Russell was surprised to learn that his molding reputation had reached the far shores of Australia: he was invited by Drs. Tom and Pat Rich to visit them in Melbourne in order to cast the remarkable type specimen of *Ausktribosphenos*. While on his way there, a second specimen came to light, which Don was able to mold also, along with (small) dinosaur and eel skulls, all from Australia's intriguing early Cretaceous. Closer in time to his usual territory, Don spent several days in Sydney immortalizing Tertiary mammals in silicone rubber, thanks to open-arm (and collection) treatment from Mike Archer and Sue Hand. Based on his experiences in Melbourne and Sydney, Don can testify that Australian hospitality is unbeatable.

Denise Sigogneau-Russell reports that, on top of the mammalian faunas from Moroccan (two papers in print, of which one with Susan Evans), Purbeck (two papers in print with P. Ensom), and Saint-Nicolas-de-Port (one paper in prep with P. Godefroit), she has been offered for study the Kirtlington mammalian collection (upper Bathonian of England), by extreme courtesy of Prof. K. A. and Dr. D. Kermack, a collection which consists essentially of several hundreds of isolated teeth. A brief examination of the latter revealed the very unexpected presence of the Chinese weird therian taxon *Shuotherium*, by both lower and presumed upper molars; the latter honor the perspicacity of Chow and Rich by conforming rather closely to what they had predicted. A paper is in press in the *Comptes Rendus of the Académie des Sciences*. This gives D. S-R the opportunity to announce that the paper on Allotheria from the same Kirtlington locality, by Prof. K. A. Kermack, Dr. D. M. Kermack, and Prof. Mills, is in press in *Acta Paleontologica Polonica*, after a long and convoluted history; Dr. Susan Evans is to be thanked for her considerable and vital help in this matter. P. Ensom (London) identified a tooth from his new Purbeck collection as representing the North American genus *Eurylambda*. A short note in collaboration has been submitted on this valuable addition to the very partial knowledge of this key

mammalian genus. These various unexpected occupations have delayed the study of the Moroccan triconodonts, which should, however, be in a presentable state for the Tenth International Symposium on Dental Morphology in Oulu (Finland) in August.

Philippe Taquet, depuis le début de l'année 1998, dispose de beaucoup plus de temps et peut se consacrer de nouveau pleinement à la paléontologie, car la direction du laboratoire est désormais assurée par Philippe Janvier. Après une nouvelle mission fructueuse sur le terrain au Laos, qui a permis la découverte de nouveaux ossements de Sauropodes du Crétacé inférieur dans la province de Savannaketh, les travaux de P. Taquet se sont partagés entre: l'étude d'ossements de Dinosaures du Crétacé inférieur d'Afrique (Spinosauridés et Iguanodontidés) avec Dale Russell, l'étude des ossements des embryons de Théropode du Jurassique supérieur du Portugal et la présentation des premiers résultats des études les concernant à Lisbonne devant l'Académie des Sciences, puis à la Fondation Gulbenkian à l'occasion d'un colloque international sur la paléobiologie des Dinosaures, l'histoire des sciences avec la publication d'un texte inédit de Georges Cuvier, qui à l'âge de 18 ans raconte dans un récit très plaisant, illustré de dessins et d'une aquarelle de sa main, ses huit jours de promenade à pied dans les Alpes Souabes (Wurtemberg) en 1788. D'autre part, grâce à l'aide précieuse et à la remarquable traduction de Kevin Padian, l'ouvrage "L'Empreinte des Dinosaures," est édité aux Editions Cambridge University Press le premier Octobre sous le titre "Dinosaur Impressions: Postcards from a Paleontologist." Enfin, P. Taquet a pu obtenir aide et crédits pour commencer les travaux de rénovation du bâtiment qui abrite dans le Jardin des Plantes, les galeries d'Anatomie Comparée et de Paléontologie dont nous célébrons le 100^{ème} anniversaire cette année. Une restitution de ces lieux classés monuments historiques est entreprise; une première tranche de travaux permettra de moderniser les installations électriques et de proposer au public une présentation nouvelle de quelques thèmes: évolution des Chevaux, des Proboscidiens, des Primates, des Dinosaures aux Oiseaux. Bien entendu, le mobilier de 1898 et les milliers de spécimens seront conservés in situ; les travaux entrepris devraient permettre de redonner toute leur splendeur passée à ces lieux magnifiques.

Pascal Tassy returned last July and August to Montréal-du-Gers, a late early Miocene locality discovered just ten years ago. Among the perspectives is the excavation of more deinotherid and rhinocerotid material, especially the elasmotherid *Egercytherium* studied by Pierre-Olivier Antoine. Apart from this, Pascal is busy with the first step of the reorganization of the "Galerie de Paléontologie" of the Museum where among other topics the proboscideans will be shown with a new look (or lifting to speak more modestly). One result will be some difficulties in accessing the research collections beginning next September, but in the long term the consequences should be positive.

Marc Augé (a student of J. C. Rage) is approaching the completion of his thesis on Paleogene lizards from western Europe. He is finishing illustrations of his thesis. He published a review of agamid lizards from the Paleogene of western Europe (*Belg. J. Zool.*, 1997) and a paper on the phylogenetic significance of acrodont teeth in squamates (*Herpetol. J.*, 1997).

G. Clément (gclement@mnhn.fr) is beginning his thesis about the systematics and evolution of the Porolepiformes under the guidance of Philippe Janvier and Daniel Goujet. In order to understand the interrelationships among the Porolepiformes and with respect to other traditionally associated taxa (all the other Sarcopterygii), he needs to compare several anatomical structures of the Porolepiformes with those of the Dipnoi and other Sarcopterygii (especially Actinistia, Osteolepiformes, and basal tetrapods). Sister-group relationships between these taxa are still under discussion and need to be clarified; his study will try to contribute to the resolution of this problem. In this aim, he spent two months and a half in the Field Museum of Chicago and in the amnh of New York to visit their sarcopterygian collections. He is also interested in Actinistia, a description of a lower Triassic coelacanth from Madagascar is in press.

Sylvain Duffaud is nearing completion of his thesis (under the direction of J. C. Rage) on Late Cretaceous and Paleogene amphibians from western Europe. He is currently studying albanerpetontids from a new Cretaceous locality of southern France and amphibians from the late Oligocene of the Phosphorites du Quercy. On the other hand, the study of salamanders from the earliest Eocene of Creil appears to be very promising.

Didier Dutheil is still working on the basal vertebrates from the Kem Kem beds of Morocco, and especially a new articulated polypterid fish. He hopes to complete his study before the end of the year to submit it for a Diplome de l'Ecole Pratique des Hautes Etudes. He spent the end of 1997 in Africa with Paul Sereno and his team. In the beginning of this year, he went to Mauritius Island with Anwar Janoo looking for dodo remains and "fishes," and then to Yemen.

Arnaud Filleul, started a thesis on the phylogeny of elopomorph fishes at the beginning of the year under the guidance of Sylvie Wenz and Hervé Lelièvre. Last summer he collected new material from the Hauterivian of France in which he found a new taxon of elopomorph. He is now describing this taxon and analyzing the consequences of its integration in basal teleosts phylogeny. His work aims to clarify the phylogenetic position of all the fossil taxa which are usually attributed to elopomorphs and to clarify the relationships of this group with new osteological features.

Claire Sagne continue d'étudier les Siréniens en s'intéressant particulièrement aux formes éocènes, jusqu'à présent considérées comme les premiers membres de la famille des Dugongidae. Sa thèse, qu'elle prépare sous la direction de Pascal Tassy, s'appuie sur un fabuleux site de l'Eocène supérieur, situé dans le sud-est de la France (Castellane, Alpes de Haute-Provence) et appartenant à la Réserve Géologique de Haute-Provence. Le caractère exceptionnel du gisement a été confirmé en août 1997 lors de la deuxième campagne de fouilles puisque plusieurs crânes, os des membres et des ceintures ont été découverts. Ce fut également l'occasion pour Claire de rencontrer le spécialiste américain des siréniens, Daryl P. Domning, lors de sa venue sur le site. Plusieurs mois sont nécessaires pour préparer une partie du matériel collecté; les pièces les plus remarquables sont un crâne magnifiquement préservé, probablement du genre *Eosiren*, et la plus ancienne main de sirénien connue à ce jour. Cette main, en fin d'étude, permet

d'approfondir la connaissance du membre antérieur des premiers siréniens et de confronter ses caractères à ceux des proboscidiens, entre autres.

Nuran Sarica has been preparing her thesis on Neogene micromammals of western Anatolian graben systems, in the laboratory of paleontology of the Muséum National d'Histoire Naturelle, Paris, since 1996 under the guidance for publication in a special volume of *JVP* on one of the vertebrate localities in Turkey (Sinap Tepe). She is writing an article reviewing the western Anatolian Neogene mammal localities, aiming to establish Neogene biochronology with micromammals. During 1997 and 1998 summer field trips she found six new Neogene vertebrate localities in western Anatolia. She will prepare and describe the newly found material, planning to finish her thesis in 1999.

J. Sébastien Steyer (steyer@mnhn.fr) continues his thesis (with J. C.

Rage) on ontogeny and phylogeny of eryopoids (temnospondyls) with J. C. Rage and P. Janvier as supervisors. After a historical overview of Paleozoic and Triassic amphibians of France (Steyer et al., 1998. *Les amphibiens du Paléozoïque et du Trias français: historique et inventaire. Bull. Soc. Hist. nat. Autun*, 162), redescription of the early Permian genera *Actinodon* (of France) and *Cheliderpeton* (of the Czech Republic) are respectively in press (*Geobios*) and in preparation (with Ralf Werneburg, Schleusingen, Germany). In 1996 and 1997, J. Sébastien was responsible for excavations in the Autunian of Buxières-les-Mines (one of the last French coal mines); this work is supported by the "Rhinopolis Association" headed by F. Escuillié (special thanks to Jacques Rival and his staff). Many fossils were recovered from the bituminous shales. A multi-authored preliminary paper on the flora and fauna of Buxières is in progress. Results of this fieldwork were presented in meetings (Third World Congress of Herpetology, Prague 1997; deuxième Congrès national de Paléontologie, Paris, 1996). Description of the new tetrapod specimens is in preparation with R. Werneburg. J. Sébastien also begins a reappraisal of the capitosaur fauna from the Triassic of Madagascar. (Christian de Muizon)

Université Paris VII, Département des Sciences de la Terre

L'année 1997 a d'abord conduit Jean Gaudant en Bulgarie où, en collaboration avec Milorad Vatshev, de l'Université des Mines et de la Géologie de Sofia, il a poursuivi l'étude de l'ichthyofaune lacustre du sud-ouest de la Bulgarie, dont l'âge s'échelonne entre l'Oligocène basal et le Miocène terminal. Jean s'est ensuite rendu à Londres où il a repris l'étude de l'ichthyofaune miocène lacustre d'Allemagne, un projet auquel il travaille activement. Ses recherches sur l'ichthyofaune néogène du bassin méditerranéen ont enfin nécessité une nouvelle mission en Espagne pour y étudier un nouveau gisement de poissons messiniens de la province d'Alicante.

En 1997, Jean a également terminé plusieurs travaux. Il a complété son étude des Amiidae paléogènes de l'île de Wight et la description détaillée de l'espèce *Cyclurus kehleri*, du célèbre gisement éocène de Messel (Allemagne). En collaboration avec Bettina Reichenbacher, de l'Université de Karlsruhe, il a décrit le premier squelette de

Channidae découvert dans le Miocène inférieur d'Illerkirchberg (Allemagne). Il a également proposé une expédition continentale en Serbie et a réussi à achever un ancien projet (en collaboration) sur les poissons, mollusques, foraminifères, et diatomées de deux nouveaux gisements messiniens de Crète. (Jean Gaudant)

GERMANY

Löbbecke-Museum + Aquazoo, Düsseldorf

This is the first contribution from the Löbbecke-Museum + Aquazoo, Düsseldorf, to the *SVP New Bulletin*.

The Löbbecke-Museum has a Natural History Museum with a large aquarium and a vivarium. The Museum's emphasis lies on malakozoology, entomology, and earth sciences. The Museum is planning an exhibition on Recent and fossil sharks with the title "Hai-Lights" ("Hai" in German = shark) for the year 2000. Joseph Boscheinen designed the evolutionary-paleontological part of this exhibition.

In February 1997, Sven Sachs organized the First Meeting of German-speaking Paleoherpertologists in Düsseldorf. For March of the year 2000, Sven (in collaboration with Raymund Windolf at Visselhøvede, Mike Benton at Bristol, and Dave Weishampel at Baltimore) is now planning the First Symposium on European Dinosaurs to be held in Düsseldorf. Please contact one of us for further information (Sven's e-mail: dinosven@compuserve.com).

At the present time, Sven is involved in a couple of projects on fossil tetrapods. Together with Michael Maisch (Tübingen), he is describing a partial skeleton, including an incomplete skull, of a large elasmosaur from the Lower Cretaceous of Sarstedt (North Germany). Sven and Ionnis Michelis (Bonn) are currently collaborating on a paper on the cranial anatomy of *Barosaurus*, in which Sven describes the Tendaguru material and Ionnis describes the materials from the Howe Quarry. Another paper by Sven on the cranial anatomy of *Brachiosaurus* has been submitted to the symposium volume of the "2. Jahrestagung der deutschsprachigen Paleoherpertologen." Finally, a series of papers on German dinosaurs (in collaboration with Raymund Windolf) has been submitted to the Dinosaur Report. (Sven Sachs and Joseph Boscheinen)

NEW ZEALAND

North Island Vertebrate Palaeontologists

Since Joan Wiffen and Joseph McKee were at the SVP meeting in New York, they have been busy collecting new material from the Late Cretaceous Mangahouanga Stream locality. The finds have been mainly marine reptile bones, but a few scraps of dinosaur material have also been found. Last summer's collecting was hindered by the extreme fire risk at the site, due to the very strong El Niño conditions here in New Zealand, and an extensive pest eradication program in the area to keep the introduced possums from

destroying the native bush. 1997 has seen the opening of the "Once Were Dinosaurs" display at the Napier Museum. The display documents the discovery of New Zealand's dinosaurs by Joan and her team. The display includes casts, bones, and models, as well as video and interactive computer stations. The extensive marine reptile fauna (mosasaurs, turtles, etc.) collected from the site is well illustrated. A smaller display is in the new Museum of New Zealand-Te Papa, Wellington, which opened last February.

A number of groups have visited the Mangahouanga Stream locality during the past two years. These included a group of fourth-year geology/paleontology students from Auckland University and members of the Wellington Branch of the Geological Society of New Zealand. A recent visitor to the locality was Robert Dunlap (R.E.D. Productions, California) who was in New Zealand to film the New Zealand K/T boundary sites (including the classic Woodside Creek boundary) and the New Zealand dinosaur site for a new Part 5 to his Extinction series (Video, TV, cd-rom versions) from a Southern Hemisphere perspective.

The 1998-99 summer season will see Joan and Joseph busy with an extensive program on the Late Cretaceous marine reptiles from the Mangahouanga Stream locality. This will include the search for new mosasaur material, as well as a more in-depth look at the relationships of the Mangahouanga mosasaurs to those found elsewhere in New Zealand and overseas. Part of the research is being funded by a National Geographic Society grant, awarded to Joan, Joseph, Gordon Bell (South Dakota School Mines and Technology), and Mike Caldwell (Canadian Museum of Nature). The grant will allow Gordon and Mike to join Joan and Joseph in New Zealand for a month's fieldwork, etc.; this will add their knowledge about mosasaurs in the U.S. and Canada to the project.

Joseph McKee has still been working on his Tertiary vertebrate sites and the past two years have seen the recovery of Pliocene phocid seals, dolphins, and birds. The most significant discovery was an almost complete phocid seal from the Ohawe Sandstone (3.1-3.6 my), encased in a 7-8 ton concretion which split into several large blocks when it fell about 10 m down the cliff face. All that is missing from this specimen are parts of some of the ribs. A more manageable find was an isolated phocid skull in a 20 kg concretion. These add to the growing collection of seal skulls and partial skeletons known from the Hawera Locality. The Ohawe Sandstone has produced two complete pseudodontorn (bony-toothed birds, Pelagornithidae) and humeri, as well as bones from several very much smaller marine birds. Last year the Auckland University fourth-year geology/paleontology students visited the Hawera locality and helped Joseph move dolphin and fish material into dump sites in preparation for their later collection. Two other visitors to the Hawera locality were Annalisa Berta (San Diego State University) and Yoshihiko Okazaki (Kitakyushu Museum of Natural History). (Joseph McKee)

PEOPLE'S REPUBLIC OF CHINA

Institute of Vertebrate Paleontology and Paleoanthropology (ivpp), Chinese Academy of Sciences, Beijing

The staff of ivpp offer to share some recent highlights of their active research programs with the svp community. They have been quite diligent (and successful) in securing funding, collecting fossils, publishing papers, and promoting international exchanges.

Funded by a special grant from the Chinese Academy of Sciences (of which Meemann Chang is the PI), ivpp has had some good success in two consecutive field seasons in the Late Jurassic-Early Cretaceous Yixian Formation in Beipiao, Liaoning, where *Confuciusornis*, *Zhangheotherium*, *Sinosauropteryx*, and *Protarchaeopteryx* have been found. Fieldwork in summer 1998 was a smashing success. The crew led by Zhilu Tang (now an assistant director of ivpp) opened three sizable quarries, and discovered 50 specimens of *Confuciusornis*, a half dozen *Psittacosaurus*, and a variety of other vertebrates including some very interesting lizards. A specimen of the prized *Protarchaeopteryx*, possibly also those of *Sinosauropteryx* had been found in June. The teamwork in 1997 has resulted in a detailed paper (Wang et al., 1998. *Vertebrata Palasiatica*, 36[2]) that helps to establish the stratigraphic occurrences of these important vertebrate fossils in the Yixian Formation at the richly fossiliferous Si-he-tun and Jian-shan-gou sites. The crew of this summer fieldwork included Lianhai Hou, Fucheng Zhang, Yuanqing Wang, Fan Jin, Jiangyong Zhang, Yuan Wang (a former student of Linda Trueb), Xing Xu, Xiaoning Wang (a postdoc with Zhiming Dong), Chun Li, and several other staff members. The ivpp is currently expecting a Chinese nsf grant and its matching funds from the Ministry of Sciences and Technology for further exploration in Beipiao next year.

The ongoing Sino-Japan-Mongolian Dinosaur Project had another fruitful field season in Mongolia. Among the participants of this project are Zhiming Dong, Junchang Lu, Xing Xu, and Xiaoning Wang from the ivpp, Yoichi Azuma (Fukui Prefectural Museum), Yukimitsu Tomida (National Museum of Sciences) from Japan, Yoshitsugu Kobayashi (Ph.D. candidate at the Southern Methodist University), and Rinchen Barsbold (Mongolian Academy of Sciences). Sauropods probably referable to *Mamenchisaurus* were found this year. Several beautifully preserved ornithomimids have already been prepared. Yoshitsugu was studying ornithomimids this past summer in the ivpp. Junchang is currently studying an oviraptorlike theropod while working on his Master's degree with Dong.

The ivpp and Zhexi Luo (Carnegie Museum, usa) have agreed to undertake a long-term cooperative study on Mesozoic vertebrates in the Mazongshan area of Gansu Province. Luo obviously had a good time with his colleagues in the Gobi Desert in Gansu and Inner Mongolia (from June to July 1998). His crew consisted of Justin Georgi (a student of Luo's from the University of Pittsburgh), Hailu You (University of Pennsylvania), Feng Tang (a postdoc with Zhiming Dong), and Zhonghe Zhou (University of Kansas). Notable finds include a mammalian lower jaw, a variety of dinosaurs (ankylosaurs, sauropods, theropods, psittacosaurus, etc.), crocodiles, and turtles, as well as plants and invertebrates. The age of the fossil-bearing Xinmingbao Group is the Early Cretaceous, probably older than the Aptian-Albian, pending the studies on newly collected spore-pollen samples. The same crew is expected to be back in the field in 1999.

Jie Ye (deputy director of the ivpp) is developing a new project on "Higher-resolution biostratigraphy and time table of the Chinese Cenozoic," which has been funded by the Chinese Academy of Sciences. As an initial step he visited the Bayan Ulan area of Inner Mongolia in June 1998, together with Xueshi Huang and Jin Meng (University of Massachusetts). New material from the Eocene deposits is biostratigraphically important, and a paper is being prepared to discuss its significance.

Wenyu Wu spent the last field season of a four-year project "Mid-Miocene Mammal Fauna of North Junggar Basin" in the Ulungu River Basin in Xin-Jiang with Jie Ye, Jin Meng, and Shundong Bi (a Master's student with Wu) from July to early August 1998. This project is supported by the Chinese nsf, the Chinese Academy of Sciences, and the Chinese Ministry of Sciences and Technology. This year's work continued to be successful. Numerous fossils from four successive faunas ranging from Oligocene to middle Miocene have been collected. The Oligocene fauna at the Ulungu River Basin is new and very interesting, for this Oligocene sequence and its thick underlying beds were previously misinterpreted as the Mesozoic. This new finding helps to establish yet another stratigraphic section that contains the Oligocene-Miocene boundary in China. This study provides a better understanding of the faunal exchanges between Asia and Europe, and the effect of the uplift of Tibetan Plateau on the biota and on environmental changes in Central Asia.

Zhuding Qiu (director of the ivpp) and Banyue Wang enjoyed the company of Xiaoming Wang and Will Downs in a National Geographic Society-supported field trip to the Chaidamu (Tsaidam) Basin, Qinghai Province, from June to July, 1998. This is the first time a VP group has visited this area since Birger Bohlin first uncovered its unique Neogene fauna during the Sino-Swedish Expeditions in the late 1920s and early 1930s. The crew was fascinated by the magnificent exposures in the Tsaidam Basin, especially the thick Neogene terrestrial strata (up to a few thousand meters) that are located within the northern Tibetan Plateau, and the result of continuous uplift of the mountains surrounding the basin. Fossil mammals from this area are dominated by a fauna that is unique to the high plateau environment. The crew expects to go back next year. By the way, congratulations to Xiaoming for his new position at the University of Long Island!

The staff of ivpp was delighted by the visit of James Swinehart and Robert Hunt (University of Nebraska) who went to the classic middle Miocene Tunggur Formation (of the Central Asiatic Expedition fame) in the company of Xiaoming Wang. The main focus of this Neogene group is the sedimentology and stratigraphy of key localities on the Tunggur escarpments, such as the Wolf Camp and the *Platybelodon* Quarry. Important evidence suggest a variety of depositional settings within the Tunggur Formation.

Supported by the Science Academy of Finland and the Chinese Academy of Sciences, an ambitious project on the "Chinese Neogene Database" is currently underway by Zhuding Qiu, Shaohua Zheng, Zhaoqun Zhang, and Liping Liu from the ivpp, and Mikael Fortelius, Juhha Pekka Lunkka, and students Lena Selanne and Anu Kakkinen from the Department of Geology of the University of Helsinki, Finland. Since 1998, Sevket Sen (Laboratory of Paleontology, Paris), Wulf Gose, and Gose's student Mulugeta Feseha

(Department of Geological Sciences, University of Texas at Austin) have joined this project. This team has already had two consecutive successful field seasons (September-October 1997 and May-June 1998) in the middle Miocene-Pliocene deposits in Lantian, Shaanxi Province. Zhaoqun and Liping are scheduled to visit Finland later this year.

Zikui Zhao continues to work hard after his "retirement." He is busy organizing the "Asian Biomineralization Symposium" to be held at ivpp October 5-7, 1998. About 30 presentations are expected to be given at the meeting. Those who are interested in attending the meeting should contact Hong Zhao (Zhaohong@mx.cei.gov.cn). Zikui's new article, "Excitations and Iridium Anomalies Observed in the Dinosaur Eggshells at the K/T Boundary in Nanxiong Basin, Guangdong Province, China," will be published in *Scientific Sinica* in 1998. Hong Zhao (a protégé of Zikui) finished a paper (in press) on "Dinosaur eggs and eggshells from Xichuan Basin, Henan Province," thanks to the support from the Chinese Academy of Sciences.

In spite of her heavy editorial responsibilities at *Vertebrata Palasiatica*, Jinling Li manages to find time for fieldwork with Xiaochun Wu to search for the vertebrates from the Permian deposits in Yumen, Gansu Province, from August to September 1998. Jinling has recently accepted two new students: Xing Xu working on segnosaurs for his Ph.D., and Chun Li for his Master's. Xiaochun is expected to stay at the ivpp until the end of 1998.

Meemann Chang is, as usual, incredibly busy. Her paper entitled "Mid-Cretaceous fish fauna from northeast China" has been submitted to the Proceedings of the Mesozoic Fish Symposium (ed. Gloria Arratia). She has also spent a lot of time coordinating the research programs in Beipiao, Liaoning Province. In the middle of August, she accompanied Guanhua Xu, deputy minister of the Chinese Ministry of Sciences and Technology, and several other preeminent academicians on a short visit to the "Chinese Mesozoic Pompeii" (the Si-he-tun site) in Beipiao, Liaoning Province. Meemann will be visiting the Field Museum during the last quarter of 1998, and will spend the Thanksgiving and Christmas holidays with her daughter in Houston, Texas.

Fan Jin was busy putting the finishing touch on his Ph.D. dissertation on the systematic study of the Chinese Mesozoic acipenseriformes, which he will defend in September 1998. He is going to spend a year as a research visitor with William Bemis at the University of Massachusetts starting late 1998. Jiangyong Zhang has just published a paper on a Chinese osteoglossomorph fish in *JVP* (18[2]). He is also working on his Ph.D. with Meemann. With help from a joint scientific program of the Chinese Academy of Sciences and the Max Planck Institute, he will be in Berlin with Gloria Arratia and Hans-Peter Schultze from October 1998 to April 1999. Min Zhu has taken up an assistant director position after his return from Germany in 1997. Despite administrative duties, he and Pingfu Chen still found time for a field trip to Anhui and Jiangsu provinces from June to July 1998. The focus of the trip was Silurian and Devonian fishes.

Lianhai Hou has been working on a book about *Confuciusornis* since his last book "Chinese Mesozoic Birds" came out in 1997. Fucheng Zhang, after a two-year postdoc

program on the microstructure of bird bones with Lianhai, is to stay at ivpp. Zhonghe Zhou expects to defend his Ph.D. thesis on the anatomy and evolution of Mesozoic birds at University of Kansas in 1999 and will return to the ivpp afterwards.

We are pleased to announce that the Fifth International Meeting of the Society of Avian Paleontology and Evolution (sape) will be held at the ivpp, Beijing, in June 2000. There will be a pre-meeting field trip to Beipiao, Liaoning Province. For those who are interested and have not received the first circular, please contact Huiling Wu or Yonghong Zhang (ivppkjc@public.bta.

net.cn).

We had the pleasure of welcoming Mark Norell, Luis Chiappe, Peter Makovicky (amnh), and Jim Clark (George Washington University) who visited the ivpp again in early August. Eric Buffetaut and Haiyan Tong visited from July to August 1998. Congratulations to Keqin Gao for his new nsf grant with Mark! After a short stay at the ivpp, Gao is going to visit some Early Cretaceous amphibian sites in Hebei and Jiling provinces late this summer.

Chuankui Li seems to have more fun working on his projects now that he is retired. He recently accepted a new Ph.D. student, Yuan Wang. Yaoming Hu, a former student of Li, co-authored a paper in *Vertebrata Palasiatica* (36[2]) with Chuankui Li, Yuanqing Wang, and Zhexi Luo on the anatomy and functional analysis of *Zhangheotherium*. He returned to Beijing in August 1998 after a fruitful visit to the Institute of Paleontology of the Free University in Berlin for the last six months. He wishes to express his heartfelt thanks to Bernard Krebs and Thomas Martin for their invitation and warm hospitality. The visit was a great success. Yaoming examined the vertebrate fossil collection of Guimarota. Along with Bernard, Yaoming recognized a petrosal from the well-known fossil *Henkelotherium*. A short paper on ear structure of *Henkelotherium* with emphasis on the inner ear will be published by the end of 1998. Yuanqing Wang spent a long summer (May-July) in Beipiao, Liaoning, and is expected to be the co-PI of a Chinese nsf project on Mesozoic vertebrates in that area. He is grateful to Thomas Rich (Museum of Victoria) and Mike Archer (University of New South Wales) for their hospitality during his visit to Australia (27 July-28 August) with the help of a joint program between Chinese Academy of Sciences and its Australian counterpart. He spent much of his time in examining all the Australian Mesozoic mammals, and the mammals from Early Eocene at Murgon, Miocene to Pliocene in Riversleigh, and modern monotremes and various marsupials. Yuanqing is also going to participate in the description of the second tooth of *Yingabalanara*, an enigmatic mammal from Riversleigh.

Finally, there is some news from the Department of Paleoanthropology. The International Symposium on Paleoanthropology in Commemoration of the 70th Anniversary of the Discovery of the First Skull of Peking Man is to be held October 12-17, 1999. The ivpp is going to host this meeting (organizer: Zhuding Qiu). There will be four pre- and post-symposium excursions (zkdivpp@public.east.cn.net). The biggest news is probably about a very ambitious project, "The study of the origin of early man and its environmental

background." This project, headed by Zhanxiang Qiu, is funded by a special grant (about US\$700,000) from the Chinese government. It is aimed at finding fossil hominids or apes ranging from eight to two million years. The targeted field sites include Yuanmou (Yunnan Province), Huainan (Anhui Province), Nihewan (Hebei Province), Shaanxi Province, etc. The past summer witnessed great success for the crew led by Changzhu Jin in Fanchang, Anhui Province. In the fissure deposits in the "Renzi Cave" (early Early Pleistocene), they discovered quite a few primates (four upper jaws, five lower jaws, one mandibular symphysis, and 45 teeth) among abundant mammal fossils. Furthermore, they have found several stone and bone artifacts, which may represent the oldest evidence of human activity in East Asia. A more extensive excavation is already planned for September to October 1998. (Zhonghe Zhou)

SOUTH AFRICA

Bernard Price Institute for Palaeontology (BPI)

University of the Witwatersrand, Johannesburg

It has been several years since the staff of the Bernard Price Institute for Palaeontology (bpi) have reported their activities in the *SVP News Bulletin*. Recently a new paleontology museum gallery was opened at the Institute and has been named the James Kitching Gallery in honor of our legendary fossil collector who worked at the bpi for 51 years, and collected 95% of the fossils in the collections. Two years ago James retired to Graaff-Reinet, the town where he grew up, and still continues to collect fossils for the institute.

Chris Gow has taken 12 months sabbatical leave over the past two years in order to complete several research projects prior to retiring at the end of 1999. He recently had five papers published on parareptiles, including two on *Eunotosaurus*, which Chris hopes will bury the notion of *Eunotosaurus* as a caseid pelycosaur! Currently he is trying to get a description of the skull of *Protosuchus* published, and to finish a paper on the postcranial skeleton of *Pachygenelus*. Chris has also devoted considerable time to fine preparation of some of the large collection of *Tritylodon* specimens collected by James and semiprepared under his direction at the bpi. Despite the poor preservation of much of this material, there is one with quadrate and postdentary rod in perfect association with the skull, one which has a stapes, and juveniles with two pairs of upper incisors and canines, proof that one should never scorn "well-known" taxa. Chris currently has an honors student, Ray Richter, doing a project on the dentition of this material.

Over the past several years Bruce Rubidge has been involved primarily in a research program to find the earliest terrestrial vertebrates from the Karoo. Several new basal therapsid taxa have been discovered and have resulted in several descriptive papers. Most fieldwork has been undertaken along the Ecca-Beaufort contact in the southern part of the Karoo Basin, but more recently efforts have concentrated on the northwestern part. Exciting new discoveries include a basal anomodont, a weird new type of dicynodont, and an intriguing new anteosaurid dinocephalian skull. Bruce and Juri van den Heever of

Stellenbosch University are busy with a long-term revision of the Dinocephalia, and are currently occupied with a redescription of the skull of *Anteosaurus*. Last May Bruce accompanied a team of geologists from the University of Würzburg, Germany, to collect fossils in the Waterberg and Huab Karoo basins of Namibia. Fortune smiled favorably on this expedition and a few worthwhile therapsid and amphibian specimens were recovered which would help biostratigraphic correlation of the rocks of these basins.

So far this year two students have completed their dissertations: John Hancox was awarded a Ph.D. for his mammoth study on the sedimentology, paleontology, and stratigraphy of the contact between the Upper Beaufort and Molteno in South Africa. In the course of his research John has discovered a new fauna of advanced large dicynodonts from the uppermost *Cynognathus* Assemblage Zone. Johann Neveling recently submitted his M.Sc. on the sedimentology, paleontology, and stratigraphy of the contact between the *Lystrosaurus* and *Cynognathus* assemblage zones.

Elizabeth Latimer has been studying the morphology, taxonomy, phylogeny, and biostratigraphic significance of the Karoo's rhinesuchoid temnospondyls for her Ph.D. The rhinesuchoids were long thought to be one of the few temnospondyl groups to survive into the Mesozoic, with the genus *Uranocentrodon* as the sole Triassic representative. Recent fieldwork reveals that all *Uranocentrodon* fossils can be traced to a single Permian locality. Accordingly, rhinesuchoids appear to have been restricted to the Paleozoic, and Elizabeth, John, and Bruce should have a paper out on this study very shortly. Elizabeth plans to complete her dissertation before Christmas.

Sean Modesto began a two-year postdoctoral fellowship here last January to investigate the interrelationships of anomodont therapsids. Soon after arriving from Canada, Sean was plunged into two weeks of Karoo fieldwork, where he helped Bruce prospect lowermost Beaufort horizons for therapsids in eastern Cape Province. A preliminary description of a new basal anomodont, co-authored with Bruce and Johann Welman of the National Museum, was submitted to *Proceedings of the Royal Society of London*. Collaborative work is in progress on a number of new dicynodonts that Bruce and company have collected in recent years, as well as on a description of a new tiny captorhinid reptile that Sean discovered in the *Tropidostoma* Assemblage Zone while on the Trans-Karoo II, a nine-day road odyssey of Permo-Mesozoic Karoo localities that followed the Tenth International Gondwana Conference held in Cape Town this past July. After nine years at the Museum and Oceanarium Complex in the coastal holiday city of Port Elizabeth, Mike Raath is back at the bpi in a semiretirement contract position, looking at curatorial systems for the fossil collections in the bpi, as well as other collections in the Department of Anatomical Sciences (Medical School) and the Department of Geology at the University.

As far as the bpi collections are concerned, attention has focused on the Karoo vertebrate fossil collection and the Plio-Pleistocene mammal collection, as these are the two most widely used collections not only by our own staff and students, but by a steady stream of visitors from many parts of the world. The Karoo collection has not been audited since the bpi moved onto the main university campus from its off-campus location 12 years

ago, so a thorough physical check was identified as a high priority. At the same time the opportunity is being taken to update the storage location information for each specimen. Although this information for each specimen was originally recorded in the catalogue, the big move disrupted the layout in the storerooms, so that it is now sometimes time-consuming and frustrating trying to locate a particular fossil when it is needed. The new storage location information will be incorporated into the computerized collections database, so that all specimens will be immediately retrievable. In due course it is hoped to make much of the database information available to interested parties via the bpi's Website. This site can be accessed at:

<http://www.wits.ac.za/science/palaeontology/bpihome.html>. The Website is currently being upgraded and modified to include two electronically submittable forms, one for those who intend to pay the bpi a visit and who wish to work on fossils in the collections while they are here, and the other to allow those who wish to borrow fossils from our collections to initiate a preliminary loan application. Because of the legal constraints on the movement of fossils out of South Africa, it is not possible for a loan agreement to be finalized via the electronic form. (Sean Modesto)

UNITED KINGDOM

University of Bristol

Mike Benton has restudied the seven specimens of *Scleromochlus*, an enigmatic small archosaur from the Late Triassic of Elgin, northeastern Scotland. This reptile has very long hindlimbs, and it has generally been cited as a desert hopper, something like a modern jerboa. Since Huene's work in 1914, it has frequently been regarded as an ancestor of pterosaurs, a view championed more recently by a number of researchers. Study of the superb pvc casts made by Alick Walker has revealed a great deal of additional information on the skull and skeleton, and cladistic analysis indicates that *Scleromochlus* is the most basal member of the ornithodiran lineage, an outgroup to both pterosaurs and dinosauiromorphs. A manuscript has been submitted for publication.

Mike, together with Lars Juul (Copenhagen), Glenn Storrs (Cincinnati), and Peter Galton (Bridgeport), has completed a full description of the original materials of the basal prosauropod dinosaur *Thecodontosaurus*. Popular rumor was that most of the original materials, collected in Bristol in the 1830s, had been lost during heavy bombardment of Bristol during the Second World War. Many specimens were indeed lost, but over 250 remain in Bristol, and other collections exist in London and New Haven. The redescription confirms the basal position of *Thecodontosaurus* among sauropodomorphs, and that the small skeleton described by Dianne Kermack in 1984 is probably from the same genus. The cladistic analysis lends weak support to the idea that prosauropods form a clade, independent of sauropods. However, this analysis, and others published recently, all suffer from extraordinarily weak support when the robustness of nodes is assessed (a fact rarely mentioned by authors of cladograms of dinosaurs). A manuscript has been submitted.

Mike continues his work with postdoc Matt Wills and graduate student Becky Hitchin in comparing cladistic and stratigraphic data on the fossil record. Several publications are in press and in progress. One recently published (in *Molecular Phylogenetics and Evolution*, 9[3]) shows that molecular trees for mammals are less congruent with stratigraphic data than are trees based on morphological cladistic analyses. However, before the mammal paleontologists become complacent, the degree of congruence has been declining from 1975 to the present day!

Mike and Clive Trueman, together with David Martill (Portsmouth) and Eric Buffetaut (Paris), began fieldwork in the mid-Cretaceous of southern Tunisia in March 1998. This brief preliminary trip revealed the richness of deposits in the famous "Continental intercalaire" of North Africa, first described by de Lapparent in the 1950s. Literally millions of bones of dinosaurs and other vertebrates are there to be excavated, and we have a collaborative agreement with geologists in Tunisia to mount a larger-scale program of work, beginning in 1999. Gilles Cuny carries on his work on the vertebrate microremains from the European Upper Triassic and the description of several faunas from the UK, France, Belgium, and Luxemburg are in press or in preparation with several colleagues from France, Belgium, and the US. Among the most interesting results are the finding of a cynodont tooth of *Pseudotriciconodon* in the Charles Moore collection kept in the Museum of Bath (England), a tooth belonging to an ornithischian dinosaur from the Rhaetian of Lons-le-Saunier (France), and a new species of neoselachian from the Norian of Grozon (France). A paper recently published in *Paleovertebrata* (Godefroit and Cuny, 1997) also described a new venomous archosauriform (*Graouillyodon hacheti*) and several teeth of ornithischian dinosaurs from the French site of Saint-Nicolas-de-Port. Gilles also carries on the study of the enameloid ultrastructure of shark teeth to understand the pattern of the early radiation of the neoselachians in the Triassic. For this purpose, he is studying teeth of *Hopleacnathus* from the Permian of Germany (with S. Brandt and W. Munk), as well as shark teeth from the Middle Triassic of Nevada (with O. Rieppel, Chicago, and M. Sander, Bonn). He is also studying teeth from the Lower Cretaceous of Thailand with E. Buffetaut (Paris), V. Suteethorn (Bangkok), and H. Cappetta (Montpellier). Finally, Gilles and L. Barbieri (Paris) are preparing the publication of the Permo-Triassic reptiles they found in Madagascar in 1996.

Gareth Dyke continues with his thesis work on the fossil birds from the early Eocene London Clay of England. He is describing a new fossil parrot specimen from the deposit along with Joanne Cooper (Natural History Museum). Work is also in progress with Jeremy Rayner (Biological Sciences) on fore- and hindlimb proportioning in the evolution of flying vertebrates.

Kenny Monsch continues with his Ph.D. research on the systematics of the fish suborder Scombroidei. Studies on Recent scombroids have led to a number of totally different and confusing phylogenies that he is trying to resolve by incorporating fossil, as well as Recent material in analyses. Over the past year studies of both fossil and Recent specimens in collections in London, Moscow, and Washington, D.C., have helped to formulate some hypotheses on scombroid relationships, but these remain to be tested.

Some new fossil scombroid species have been discovered and these will be published shortly.

Debbie Wharton has begun her Ph.D. project on the evolution of the diapsid brain and braincase. She plans that the main focus of this work will be on brain evolution over the transition from theropod dinosaurs to birds. She is off to France in January to work at the University of Poitiers on an Entente Cordiale Scholarship.

Don Henderson is finishing up his Ph.D. research on the biomechanics of bipedalism in dinosaurs, and should be done before the end of the year. He recently had a manuscript describing a mathematical-computational method for estimating the mass and centers of mass of extinct animals accepted for publication by *Paleobiology*. This work is a spin-off of the dinosaurian locomotion work, and will be published early next year. He has also been working with Dave Unwin on a study of terrestrial locomotion in pterosaurs.

Mark Wilkinson, Joe Thorley, and Paul Upchurch have been working on a development of decay analyses for assessing the support for phylogenetic hypotheses in cases where problematic taxa such as highly incomplete fossils introduce instability into phylogenetic hypotheses and analyses. This work is also expected to lead to new measures of the strength of membership or nonmembership of individual terminal taxa with respect to particular clades. Mark Wilkinson is leaving Bristol in October to become Associate Keeper of Zoology at The Natural History Museum, London.

We are pleased to welcome new VP graduate students to the Department: Marco Signore, who began a project on the biomechanics of dromaeosaurid dinosaurs in 1997, and has already published a description of *Scipionyx* in *Nature*, an astonishing new baby dinosaur from southern Italy which has the guts and other soft parts preserved. In addition, Lucy McCobb has begun a project on the geochemistry of preservation in terrestrial environments. A further crop of new students begins in October 1998: Max Langer from Brazil, working on a new find of perhaps the basalmost sauropodomorph from southern Brazil; Emmanuel Fara from France, working on patterns of the evolution of vertebrates over the past 100 Myr; Huw Boulton, studying the famous sites of exceptional fossilisation in Karatau, Kazakhstan; and Kate Harcourt-Brown, studying the shape and balance of phylogenetic trees. While welcoming such an influx of new blood, we are also deeply saddened by the recent death of Bob Savage, a good friend who was recently smitten by cancer while he was still working at his prime. (Gareth J. Dyke)

Paleobiology Research Group, University of Portsmouth; Museum of Isle of Wight Geology

Life is still hectic here in Portsmouth, has been for some time, and it looks as though its going to become more so. Our first intake of undergraduates for our paleobiology degree have now reached their final year, and so our teaching load has increased yet again. Still, they're a great bunch of students and they are working very hard, and four of them are undertaking VP-related final year projects.

In July we held a mini-workshop on Cretaceous biodiversity jointly sponsored by the Palaeontological Association and the European Palaeontological Association. There were eight speakers who presented discussions on the diversity of corals (Hans Loesser, Germany), foraminiferans (Malcolm Hart), theropods in the English Wealden (Darren Naish), African and European dinosaur faunas (Mike Benton), Cretaceous birds (Paul Davis), Lissamphibia plus other small herps (Susan Evans), and pterosaurs (Dave Unwin). For my sins I talked about the total diversity of the Crato Formation of northeastern Brazil. Although the emphasis was on vertebrates, the meeting wasn't originally planned that way. The non-arrival of at least one of our continental speakers coincided with the French soccer team making it to the final of the World Cup! (Does anyone out there think the Brazilians threw the game in exchange for weapons-grade plutonium, or am I just becoming too cynical?) We also held a post-meeting field trip led by Martin Munt to visit classic Cretaceous localities on the Isle of Wight. Global wetting spoiled our appreciation of some quite spectacular dinosaur footprints, and the urge to collect fossils waned as the rain intensified. This did not prevent Andrew Ross (Natural History Museum, London) from finding more than 50 fossil insects.

Many exciting things have happened here on the discovery front. Steve Hutt at the Isle of Wight Museum of Geology has discovered yet another new theropod in the Wealden and we hope to get this written up soon. The media loved this, with Radio 4 devoting 30 minutes of prime time to the discovery; Steve is now taking bookings. Paul Davis of avian taphonomy fame is now working in our group as a visiting fellow and has several "birdy" things in prep. Paul and I were recently examining a pretty flight feather from the Brazilian Crato Formation and found it to be covered with eggs of an ectoparasite. That raises some interesting questions since proof of feathered dinosaurs came out of China recently. Did birds inherit their parasites through the theropod lineage and did avian ectoparasites co-evolve with the evolution of feathers? Did feathers evolve as a defense against ectoparasites and have nothing to do with either flight or insulation?

Mike Benton, Clive Trueman (both Bristol), Bob Loveridge our paleo technician here in Portsmouth, and Martill + family visited some of the new dinosaur sites in southern Tunisia along with Eric Buffetaut. We drove down in our new field vehicle through Italy, stopping briefly to examine the victims of Vesuvius at Pompeii. We had very little time for serious excavating, but we managed to obtain excellent material for taphonomic analyses and logged several sections. Mapping out one of the bone beds proved exciting, as you could not take a step without finding a tooth from *Carcharadontosaurus* or *Spinosaurus*.

By way of an anecdotal story, chatting over a cup of coffee down at the Isle of Wight Museum in early July, Martin Munt and I were visited by an amateur collector wanting to know what "this 'ere bone" was from that he had just picked up off the beach. "This 'ere bone" just happened to be the largest ever phalanx from the manus of a theropod that we had ever seen and looked suspiciously like it came from *Baryonyx*. If ever this animal broke out in spontaneous applause the noise would have shattered eardrums as far as the Tethyan shoreline. This bone makes *Tyrannosaurus rex* look small fry. But, nightmare!

our inquirer would not let us keep the specimen, neither would he leave it for us to photograph or replicate. Ever had one of those days?

On the publishing front, Mike Barker and John Radley have seen their paper on the stratigraphy of the Lower Cretaceous Vectis Formation (Wealden Group) of the Isle of Wight published; Dino Frey (Karlsruhe) and Martill have their paper on a pterosaur with soft tissues preserved published in *Neues Jahrbuch* (that's the little critter we reported on at the New York svp meeting), and Martill's chapter on the fidelity of soft tissue preservation in the Santana Formation of Brazil just came out in Steve Donovan's new book "The Adequacy of the Fossil Record" published by Wiley. Meanwhile we await editors' decisions on several other submissions. (Dave Martill)

UNITED STATES OF AMERICA

Northeast Region

Paleontologist at Large, Baltimore, Maryland

This has been a very productive year for Tom Lipka. His work at the Cherokee-Sanford Group's Muirkirk Clay pit is midway through its eighth successful season. In fact, just prior to the start of the current field season, a substantial amount of material had been collected to date that it is now possible to revise and extend the rather limited body of data which currently exists for the fauna of the Arundel Clay facies of Maryland's Potomac Formation. These new finds and data will have broad implications with regard to Lower Cretaceous paleobiogeography of the Dinosauria, culminating in two important papers which are now in press. The first involving theropods (Lipka) and a second paper (Chinnery et al.) reporting the first probable Neoceratopsian tooth from the Aptian of eastern North America will be available in the symposium volume for the upcoming Lower Cretaceous Symposium held at Dinamation International which follows this year's svp conference in Salt Lake City. In addition to these, at least two other papers outlining the fauna of the Arundel Clay and on the turtles of the Arundel by Peter M. Kranz will also appear in the symposium volume. Until this year's field season, the only nondinosaur vertebrate material other than the enigmatic "*Goniopholis*" was a recently reported hybodont shark. The first mammal fossil ever reported from the Arundel Clay has now been recovered and Tom is working with Rich Cifelli and Cindy Gordon of the University of Oklahoma, where they plan to describe this new critter. Tom also spent time this summer with Rich's team working in the Cloverly Formation of Montana to gain a first-hand knowledge of this Lower Cretaceous formation and to learn micropaleontological recovery techniques. A small-scale version of Cifelli's set up has been tested on the Arundel Clay at the Muirkirk site and the preliminary results are promising. Plans are now being made for a larger-scale screen-washing operation to begin at the Muirkirk site in the 1999 field season. (Tom Lipka)

Johns Hopkins University School of Medicine, Department of Cell Biology and Anatomy, Baltimore, Maryland

Mark Teaford was relieved to send off the manuscript for an edited volume on teeth (co-edited with Moya Smith [London] and Mark Ferguson [Manchester]) to Cambridge University Press. Mark, Peter Ungar (Arkansas), and Fred Grine (Stony Brook) have finally received support for dental microwear analyses of the early hominid material from Africa. Initial data collection started with time at the University of the Witwatersrand after this summer's Dual Congress in Johannesburg. Mark is also finishing analyses of many of the East African fossil monkeys, in addition to continuing work on Costa Rican howler monkeys. The latter project is now focusing on analyses of the food-processing abilities of the monkeys and how that in turn relates to the physical properties of foods and the state of the dentition.

Ken Rose continued his research in the Willwood Formation of the Bighorn Basin in July (his 30th year in the American West). Significant finds included partial skeletons of *Anacodon*, *Esthonyx*, and *Oxyaena*, as well as many well-preserved jaws of multituberculates, insectivores, omomyid primates, and viverravid carnivores. Members of the crew included Amy Chew (University of Toronto), Leslea Hlusko (Penn State), Don Kron (University of Colorado at Boulder), Vin Morgan (Granger Papers Project), and Jay Mussell and Mary Silcox (Johns Hopkins University). Mary Kraus (University of Colorado) visited to provide geological insights into two unusual quarry localities.

In the Rose lab, back in Baltimore, work continues on a number of early mammalian groups. Ken Rose wrote several review articles this year, plus a short paper on *Eurotamandua*. He is continuing work on projects mentioned in our last report. Naoko Egi is continuing her dissertation work on postcranial adaptations in hyaenodontid creodonts. Mary Silcox is just starting a dissertation project on plesiadapiform systematics, while continuing projects on unusual quarry faunas from the Wasatchian, evolution in early artiodactyls, and the microwear of modern small mammals. Jason Mussell is finishing a project using micro-CT scans to study palaeodont postcranial adaptations, and starting a study investigating allometry in sauropod dinosaurs. (Mary Silcox)

National Museum of Natural History, Smithsonian Institution, Washington D.C.

These continue to be hectic times here at the nmnh. Ralph Chapman has been busy preparing for a symposium on three-dimensional digitizing and scanning at Utah. He has also been making progress on a series of research projects on dinosaurs, including lots of modeling, paleobiogeography, footprints, morphometrics, and pachycephalosaurs. Ralph was inundated with Research Training Program interns, as is usual for the summer, and many had an interest in VP, although their projects were typically on other subjects. It was especially nice to have Rudyard Sadleir visiting from Chicago as part of this program and to have a chance to start some projects on dinosaur teeth with him. Diego Rasskin-Gutman has moved on to a new postdoc at the Konrad Lorenz Institute in Vienna.

Linda Deck has been continuing as project manager of the new Janet Annenberg Hooker Hall of Geology, Gems, and Minerals at the nmnh. She is hard at work finishing the last gallery of this exhibition, the Rocks Gallery, due to open just before Thanksgiving. In her

Dinofest talk this year, the topic was "Who Creates Museum Exhibits?" This exhibit used all the folks mentioned in that talk and then some! Whenever possible, she continues to work outside the nmnh in a consulting capacity on other exhibit projects, especially those featuring her first love, paleontology.

It has been a busy summer in VP. By the time you read this, most of the collections will have been reorganized to make room for the Bown-Rose Wasatchian collection and cantilever shelving. Also the fossil Mysticeti will be on their way to the Recent Mysticeti storage building at Silver Hill. If you plan to look at fossil baleen whales this fall, please contact us beforehand to make sure the collection will be accessible. While discussing moves, next winter the collections of sauropod material and tracks and trails are scheduled to be moved to the Museum Support Center at Silver Hill. During the move, these collections will be inaccessible for about four to six weeks, which includes time for packing and unpacking.

In May, Dave Bohaska, Fred Grady, and Bob Purdy spent a day collecting at the Lee Creek Mine and had some of the best collecting in the last 15 years at the mine. Finds included some specimens of Hemphillian land-mammal remains and a rare phocine seal. Over Memorial Day weekend they participated in another fossil festival at Aurora where they identified many specimens for the public and received a few donations for the Smithsonian's collections, including a specimen that represents a new record for the short-faced bear.

On Sunday evening they headed for South Carolina to join up with Jim Knight of the South Carolina State Museum to collect at an Early Pleistocene site that will soon become extinct. Despite unbearable temperatures and humidity, and the persistent odor of dog dirt heaved into the ditch by nearby property owners, they collected quite a few specimens and brought back 15 gal of concentrate. Their finds included marine fish, herps, and land and marine mammals. It was a most productive trip.

Bob Purdy and Shelly Applegate continue to be amazed at the amount of variation found in the dentitions of living sharks; for example, the teeth of one mackerel shark have transverse grooves like those of carcharhinid teeth and crowns like those of *Cretolamna* teeth. Shelly has been visiting the museum about every three months; he is now back in Mexico City. Bob has a Paleocene shark paper in press that should be out this fall in the *Transactions of the American Philosophical Society*.

Fred Grady reports that in June he joined Storrs Olson and David Burney (Fordham University) on the island of Kauai, Hawaii, screening and picking matrix from a cave site there. In July he spent a couple weeks in southeastern Alaska with Tim Heaton (University of South Dakota) and a large group, including an archaeological team from the Denver Museum, continuing the work there. Finally, in August he attended the National Speleological Convention in Sewanee, Tennessee. There he gave a couple of talks and accepted the transfer from the University of the South to the nmnh of a Pleistocene jaguar skeleton and other material collected more than 50 years ago. There

was concern that the material needed conservation and it was felt this could be accomplished better at nmnh.

Dan Chaney reports that he was temporarily pulled up out of the Permian and into the overburden when he took Bea Dower, a paleobotany graduate student from the University of Pennsylvania, on a tour of the Rocky Mountain states looking at Jurassic fossil plant localities. Bea and Dan enjoyed visiting and greatly appreciate the assistance given them by: Mike Beis, Wyoming blm; Dan Chure, Dinosaur National Monument; Brooks Britt and Rod Sheetz, Museum of Western Colorado; and Steve and Sylvia Czerkas, Blanding, Utah. Bea was chauffeured around by Dan in an attempt to find a dissertation project comparing the paleoecology of the Morrison with the Jurassic of Great Britain. They met with success in finding a number of new plant localities but ran into those bothersome dinosaur bones on a number of occasions. Bea is looking for plant localities to study. If any of you have a lead that you would be willing to share, Bea and Dan would be most grateful for the information.

Mike Brett-Surman is writing a Teacher's Guide for the dinosaur text he did with Jim Farlow, "The Complete Dinosaur." This will be ready for next fall. With over 20 years experience in teaching a dinosaur course, Mike will have some tried and tested tips and tricks for teachers (say that fast three times). (Ralph Chapman)

New York College of Osteopathic Medicine, Old Westbury, New York

The Anatomy Department recently became an official department at nycom and has been very busy. Nikos Solounias has a collaborative nsf grant with Bruce MacFadden to study the paleodiet of selected fossil equids. They plan to use isotope data, tooth microwear, and morphologic data. Solounias' article on the eighth cervical vertebra of the giraffe has been published by the *Journal of Zoology*. Solounias and Mikael Fortelius (University of Helsinki) have developed a new system for determining paleodiet in ungulates. They term the new method mesowear and the data will be published soon. Solounias is currently collaborating with Gina Semprebon (University of Massachusetts) and Cecile Blondel.

John Hunter has been working on several different projects related to Late Cretaceous and Paleocene mammals. In collaboration with Joe Hartman (University of North Dakota) and avocational paleontologists of the Pioneer Trails Museum, John continued his fieldwork in southwestern North Dakota documenting mammalian turnover across the Cretaceous-Tertiary boundary. John is also working with Joe and with Dave Krause (sunny Stony Brook) on a sequence of Paleocene mammal localities in North Dakota that help constrain the timing of major sea-level changes in the Western Interior. Ron Heinrich (Ohio University), Dave Weishampel (Johns Hopkins), and John are describing new mammals from the St. Mary River Formation of Montana that promise to shed light on mammalian evolution during the "Edmontonian" land mammal age of the Late Cretaceous. John spent about three weeks in Finland this summer, mainly working with Jukka Jernvall (University of Helsinki) on a new method for quantifying various aspects of tooth shape digitally in 3D. John and Jukka are applying the method to studying dental evolution in early ungulates. Most recently, John has been collaborating with Mike Foote

and Jack Sepkoski (University of Chicago) and Christine Janis (Brown University) on a project in the Cretaceous, as implied by recent studies of sequence divergence.

Scott Sampson has been busy with the bounties of the fieldwork in Madagascar that he has done with a group from Stony Brook led by Dave Krause. The new bird material and the skull of the theropod *Majungatholus* both appeared in recent issues of *Science*. Scott was back in Madagascar this summer, and last year he also was in the field in Zimbabwe. He is also working with Larry Witmer on interpreting novel narial morphologies in dinosaurs and other vertebrates. Scott, Larry, and colleagues at Stony Brook are working on a monograph on the skull of *Majungatholus*. Scott and Cathy Forster (suny Stony Brook) are working on a phylogeny of Ceratopsidae.

Mike Plavcan spent the summer collecting craniometric data on primates for an investigation of craniofacial dimorphism and variation in primates. Scott McGraw has been collaborating with John Fleagle (suny Stony Brook) on an analysis of mangabey, mandrill, and baboon skeletal anatomy and behavior. He will be heading back to West Africa to continue locomotor studies of Tai Forest primates, continuing surveys of endangered monkeys in Ivory Coast and Ghana, and heading to South Africa to study fossil baboons. Sue Rehorek is in the process of publishing on morphological aspects on the olfactory organ, vomeronasal organ, and Harderian gland on a series of Australian squamates. She is also working with W. J. Hillenius (College of Charleston) on the evolution of the Harderian gland/vomeronasal organ connection and collaborating with M. Halpern (suny, Brooklyn), on studying the Harderian gland/vomeronasal connection using autoradiography. Luke is also working on publishing various papers on perissodactyl morphology and phylogeny. He is working with Nikos Solounias on giraffid phylogeny as well. (Luke Holbrook)

Peabody Museum, New Haven, Connecticut

The division is presently in the throes of searching for a 30' \times 40' (or possibly 30' \times 20') slab containing approximately 21 tracks of *Otozoum* that Marsh arranged to purchase in 1868 with funds from the Yale Class of 1868. The slab has suddenly become quite popular, but, unfortunately, does not appear to have been seen since before Lull's 1915 definitive treatise on the Connecticut Valley fauna. If anyone knows the whereabouts of this specimen, we would appreciate hearing from them. Marilyn is busy making preparations to begin work conserving and rehabilitating the Marsh dinosaur collection. (Geraldine Parisi)

Providence College, Providence, Rhode Island

C. B. Wood spent August 2-8, 1998, in South Korea with Dr. Yuong-Nam Lee of Yonsei University, touring and exploring vertebrate localities in the nonmarine, Early Cretaceous Gyeongsang Supergroup. On the first day Wood was privileged to meet Dr. S-Y Yang, president-elect of the Korean Paleontological Society, and also Dr. S-K Lim, both of Kyungpook National University, Taegu. Two of Yang's students, Mr. Kim and Mr. Baek (currently high school teachers in Taegu and in Chinju, respectively), were able to join

Wood and Lee on the trip for a day each. Dinosaur track sites in the south and southwest coasts are already well known to the international community, but sites inland have also begun to produce scattered occurrences of dinosaur teeth (several kinds), turtle, croc, and even probably pterosaur material. One locality north of Taegu has recently yielded articulated fish skeletons in a black shale facies, and macroflora, pollen, and insect localities have been known and described in Korean journals for quite some time already. In summary, the Gyeongsang sediments are often highly indurated and outcrops must be sought in creekbeds, roadcuts, quarries, and seacoast exposures; but sediment lithologies and facies would lead one to suspect good prospects, through persistence, for the eventual discovery of microfaunal concentrations. With all the current activity these days in roughly contemporary beds around (especially) Liaoning, Northeast China, it seems only a matter of time before the Gyeongsang formations will begin to add their own important part to our rapidly expanding knowledge of the Cretaceous of eastern Asia. Many, many thanks go to Drs. Lee, Yang, Lim, and all the others who made this such an enjoyable and educational trip. (C. B. Wood)

SUNY at Stony Brook, New York

Paleontology at Stony Brook is alive and thriving. Matt Carrano has joined us for a two-year postdoctoral position, and we are very pleased to welcome him to Stony Brook. Matt defended his dissertation on the evolution of dinosaur locomotion this spring at the University of Chicago. Having bid farewell to Chicago and returned east to the land of thin-crust pizza, Matt will soon be embroiled in our ongoing Madagascar project. He is turning his attentions towards basal theropod phylogeny in collaboration with Scott Sampson and Cathy Forster. Matt's new e-mail address is: mcarrano@mail.som.sunysb.edu.

The Mesozoic crew (Dave Krause, Cathy Forster, Scott Sampson, Kristi Curry, Pat O'Connor), joined by Ray Rogers, Greg Buckley, and Mike Gottfried, spent six weeks in the field in Madagascar in June and July. The crew returned to the ever-productive Maevarano Formation, but also moved down section to explore and collect in the Ankazamihaboka Formation (also productive). This year's highlights include a partial skeleton of our second titanosaurid taxon, cranial and postcranial elements from a small theropod, parts of an enormous frog skull (well, enormous for a frog), and a gorgeous articulated skeleton of another new taxon of crocodylian.

Dave Krause is involved in a number of papers, most of them relating to the Madagascar project. Papers that are in press or submitted include one with Peter Dodson (and several others) on titanosaurid osteoderms (*JVP*); one with Rob Asher on the first pre-Holocene (Late Cretaceous) record of frogs from Madagascar (*JVP*); one with Mary Schweitzer, Cathy Forster, and many others on the presence of keratin in the claw of *Rahonavis* (*JVP*); and one with Cathy Forster, Luis Chiappe, and Scott Sampson on the primitive bird *Vorona* (in L. M. Chiappe and L. M. Witmer [eds.], *Mesozoic Birds*. University of California Press, Berkeley). Papers nearing completion include one with Ray Rogers and Joe Hartman on the lithostratigraphy of the Upper Cretaceous rock units of the Mahajanga Basin and one with Rosendo Pascual, Francisco Goin, Edgardo Ortiz-

Jaureguizar, and Alfredo Carlini on a new and very interesting specimen of Sudamerica that draws into question the relationships of gondwanatheres. Dave and Chris Wall are beginning research on size and shape variation in the teeth of *Majungatholus* and other theropods.

Dave, Cathy, Ray Rogers, Joe Hartman, and Scott Sampson are gearing up to write a general paper on the Madagascar project for *GSA Today*. Other dinosaur work in progress at Stony Brook includes papers on hadrosaurid phylogeny (Cathy), ceratopsid phylogeny (Cathy and Scott), *Majungatholus* skull morphology (led by Scott), *Rahonavis* skeletal morphology (led by Cathy), and a description of Malagasy titanosaurid skull morphology (Kristi Curry and Cathy).

Postdoctoral researcher Maureen O'Leary, working with Jim Honey and Malcolm McKenna, had a successful field season this summer in the Late Paleocene-Early Eocene Wasatch Formation in Colorado. They were assisted in the field by Stony Brook grad students Rob Hill, Gary Chimes, and Ann Johnson. The crew screen washed and successfully prospected for new localities in the region. Kristi Curry has begun her dissertation work -- an analysis of titanosaurid phylogeny and description of the new Malagasy titanosaurid material. Her paper on sauropod bone histology is now in press in *JVP*. Pat O'Connor is also starting his dissertation work on the air-sac system and its invasion of the vertebral column and appendicular skeleton in birds and theropods. Second-year grad student Benjamin Burger had an extremely productive field season working with John Alexander (amnh) in the Eocene Bridger Formation. He was fortunate enough to collect numerous skeletal and cranial elements of primates, including the first known skull of *Omomys*. Ben has begun to explore the systematic relationships of the Hyopsodontidae as a possible thesis topic.

Bill Jungers, along with Laurie Godfrey and Elwyn Simons, organized a symposium on "The Paleobiology of Subfossil Lemurs" for the XVIIth Congress of the International Primatological Society convened in Antananarivo, Madagascar, August 10-14, 1998. Major topics of discussion included the biogeography of living and extinct lemurs, the paleoecology of giant extinct species, and reconstructing the behavior of subfossils. Simons, Prithijit Chatrath, Don DeBlieux, and a team of cavers continued paleontological work in the 150-m sinkhole in the southwest of Madagascar near Tulear (Ankiltelo), while Jungers and Godfrey surveyed the east coast area near Mananjary for old and new fossil-bearing localities.

It was a big wedding season among Stony Brook paleontologists -- grad students Ben Burger and Lea Ann Jolly tied the knot this summer, as did old-timers Cathy Forster and Jim Clark (gwu). Wahoo! (Cathy Forster)

Southeast Region

Paleontologist at Large, Birmingham, Alabama

Caitlin R. Kiernan and Jennifer Caudle spent much of July in the field, locating new (and relocating old) outcrops in the Mooreville Chalk (lower Campanian, Selma Group) of western Alabama. Despite the heat, rain, and armadillos, their efforts were rewarded with the usual Mooreville suspects (neoselachians, teleosts, mosasaurs, and toxochelylid turtles), as well as an odontornithian (probably *Ichthyornis* sp.) and a small protostegid (possibly *Calcarichelys gemma*). They will return to the *Ichthyornis* site this fall to complete excavation of the specimen and collect additional taphonomic and stratigraphic data.

Caitlin has almost finished her work with the small plioplatecarpine mosasaur (reported in *SVP News Bulletin* 172) collected by Steve Johnson and Mike Everhart from the Smoky Hill Chalk of Gove County, Kansas. She has concluded that while the specimen is probably a subadult "*Platecarpus*" *planifrons*, it does possess a number of distinct apomorphies not present in the holotype (most notably, a closed stapedial notch, the suprastapedial process of the quadrates descending to meet a well-developed pendunculate infrastapedial process, much resembling the condition present in *Selmasaurus russelli*). A matrix sample from the specimen was examined by Charles Smith of the Geological Survey of Alabama, who found the sample assignable to nannofossil Zone CC-15, the *Reinhardtites anthophorus* Zone, of middle Santonian age. (Caitlin R. Kiernan)

Columbus State University, Georgia

We've been working on ongoing projects for the past year, hence rather quiet on the news. David Schwimmer continues work on the Late Cretaceous crocodile *Deinosuchus rugosus*, gathering as much morphological, scatological, and paleobehavioral information as is available from the many places the species inhabited along the paleocoasts. He recently visited the North Carolina State Museum and looked over their extensive collection of fragmentary remains, and has much appreciation for conversation and insights from Dale Russell, especially concerning reconstructed size of the beasts. Also, David enjoyed discussions with James Lamb about a juvenile *Deinosuchus* he is presently studying, and loans of specimens from Vince Schneider who is curating their collection.

Dent Williams is excavating a Pleistocene mastodon in Russell County, with the assistance of a cadre of amateurs. The extent of the specimen and preservation is so far undetermined, but any Pleistocene material is locally rare and interesting.

A minor last item: an additional piece of pterosaur wing (apparently a proximal phalange) appeared in the same Santonian locality in Georgia as the two bones (which were found five years apart) described by David and Kevin Padian in 1985. At this rate, assuming it's the same animal, we should have the whole *Pteranodon* by the third millennium ad. (David Schwimmer)

Florida Museum of Natural History, University of Florida, Gainesville

Bruce MacFadden has been working on a description of Florida *Anchitherium* from Thomas Farm and the general question of *Anchitherium* versus *Kalobatippus* in North America. This research has included recent museum trips to the University of Nebraska, South Dakota School of Mines, amnh, and mcz. In the spring Bruce also traveled to the University of Utah where he used Thure Cerling's geochemistry laboratory to analyze fossil horse teeth and interpret paleodiets from the Neogene of Florida and Pleistocene of Tarija, Bolivia. In June Bruce led a Pony Express tour to western Nebraska where the group had the opportunity to learn about, and collect from, Oligocene sediments. As part of this trip we were treated to an excellent field trip to the South Dakota badlands lead by Phil Bjork. Otherwise, Bruce is heavily involved in administration of the new flmnh exhibits and public education center.

Preparation is now complete on the skull and mandibles of a very early Pleistocene ground sloth found in February of last year in the Haile Quarries near Gainesville. This early species of *Eremotherium*, which has more digits than later eremotheres, is in the process of being described by Gerry Iuliis of the Royal Ontario Museum in Toronto and Castor Cartelle at Belo Horizonte University in Brazil. Partial skeletons, including three skulls, of seven individuals have been found at this productive Haile site.

We now have a mold and casts of the mandible of an extremely rare dwarf chalicothere found in Florida. The amateur collector who retains the original specimen, which was collected in north Florida, also has chalicothere material found in south Florida. Prior to these specimens, the only chalicothere material known from Florida was a sample collected by the museum at a site west of Gainesville back in the mid-1960s.

The Elephants! exhibit, a traveling exhibit dealing with evolution and human interaction with proboscideans is still set to open about October 10, this fall. This will coincide with the return of our Columbian mammoth from Canada, where it is now being cast and articulated by past.

Paleofest98, our second publically oriented paleontology meeting, will be held November 20-21, 1998. Jack Horner, our guest lecturer, will kick things off at 5:00 Friday evening, November 20. The first Paleofest, held in November 1996, was a great success and we know this year's Paleofest will do just as well.

Andy Hemmings, Dave Webb and other river rats report that the only good result of the Florida drought in May and June was that the rivers were unusually clear, giving excavators an extra glimpse of good finds such as small bone fish hooks and ivory shafts. At the large end of the spectrum an unusual number of tusks were recovered. We are now looking carefully at the tusks for species identity (based on Schreger line angles and tubule frequency). Some of the tusks are older than the Paleoindian cultural levels and some are contemporaneous, so life-history comparisons between these two samples are of special interest.

Dave Webb is editing a book on the Aucilla River Project (Paleontology and Paleoindian Archaeology). It is greatly enriched by the quality and variety of contributors. In

September Dave enjoyed participating in the American Quaternary Association's meeting on Inter-American Connections, held in Puerto Vallarta, Mexico. (Jay O'Sullivan and David Webb)

LSU Museum Of Natural Science

Work by Judith Schiebout and Suyin Ting on the Miocene of Fort Polk is continuing, with approximately 700 pounds of pedogenic nodule-rich rock dissolved in our bulk acid lab this summer, and the following article, which includes details on the acid lab, is available: Schiebout, J. A., Suyin Ting, and J. T. Sankey (1998), Microvertebrate concentrations in pedogenic nodule conglomerates: Recognizing the rocks and recovering and interpreting the fossils. *Palaeontologia Electronica*, 1(2): 54p., 2 MB. <http://www-odp.tamu.edu/paleo/1998_2/schiebt/issue2.htm>.

Judith Schiebout will teach a course entitled Dinosaurs, Catastrophes, and Extinctions next spring, its first offering as a general education course. She has spearheaded development of the LSU Women's and Gender Studies first science course, to be entitled Evolution of Sex. It will be team taught with her, two zoologists, and an anthropologist, and is aimed at the freshman nonscientist. Anyone who has a neat paper on sexual dimorphism in the fossil record or the role of gender in evolution that you think I may have overlooked should let me know of it at naschi@lsuvm.sncc.lsu.edu.

Julia Sankey graduated in August with a Ph.D. from LSU's Department of Geology and Geophysics. Her dissertation is titled Vertebrate Paleontology and Magnetostratigraphy of the Upper Aguja Formation (Late Campanian), Talley Mountain Area, Big Bend National Park, Texas. She is now an instructor in the department, teaching historical geology this fall to 134 undergraduates. She received a Fulbright Fellowship to go to the University of Alberta in Edmonton and the Tyrrell Museum of Palaeontology in Drumheller to work with Drs. Fox, Currie, and Eberth on a research project involving a north-south biogeographic comparison of late Campanian vertebrate faunas in North America. She will start the Fulbright in January 1999. She has two dissertation papers in review for the *JVP*; the last two dissertation papers will be submitted to *JVP* this fall. Her Master's thesis (on Plio-Pleistocene vertebrate paleontology and magnetostratigraphy of southwestern Idaho) will appear in a book on Idaho vertebrate paleontology that the Idaho Museum of Natural History Museum (Pocatello) is publishing. Contact Julia if you want to exchange reprints: (504) 388-1510, Jsankey@unix1.sncc.lsu.edu.

Butch Dooley defended his dissertation on squalodont whales on September 18. He is interested in job opportunities for May 1999 and beyond, and can be reached at squalodon@aol.com. Ray Wilhite returned to Brigham Young University to successfully defend his Master's thesis entitled Ontogenetic Variation in the Appendicular Skeleton of the Genus *Camarasaurus*. He plans to begin dissecting the alligator this fall, when he also replaces Julia Sankey as VP GA for the Museum of Natural Science. He is continuing preparation of the Fort Polk rhino material. David Hinds completed his Master's on stratigraphy and depositional environments of the area around our western Louisiana Miocene fossil sites and will begin Ph.D. studies this fall in Aberdeen,

Scotland. Scotty White has visited several east Texas Miocene sites and brought back pedogenic nodule conglomerate from the Oakville Formation for dissolution in the search for micromammals. Suyin Ting reports that the sample is already yielding bone. Walter Joyce (walterjoyce@hotmail.com) is a student visiting from the Friedrich-Alexander Universität Erlangen Nürnberg, Germany. He is working on a beautifully preserved fossil turtle from Schamhaupten near Solnhofen and would appreciate help finding literature concerning the Thalassemyidae after 1980. (Judith Schiebout)

University of Louisville

It has been over two years since our last report. John Wible has been busy with numerous projects, both paleontological and neontological. The former include Cretaceous mammals from Mongolia with Mike Novacek, Malcolm McKenna, and Guillermo Rougier (amnh) and Cretaceous mammals from Montana with Richard Cifelli (Oklahoma MNH). After nine years in the Bluegrass State, this installment represents John's last one from Louisville. As of September 30, his new address will be at the Section of Mammals at the Carnegie Museum of Natural History in Pittsburgh. However, John's departure does not mark the end of vertebrate paleontology at the University of Louisville. Happily, his colleague Guillermo Rougier, fresh (ahem!) from Mongolia, has joined the faculty in John's old department. Since Guillermo arrived in New York in late 1994, he has been occupied with Mesozoic mammals from Mongolia, Japan, and China. He will continue with these projects in Louisville. (John Wible and Guillermo Rougier)

Murray State University, Kentucky

Despite the attempts of El Niño to derail our efforts with uncharacteristically wet weather, our field season in the Meade Basin of southwestern Kansas this past summer was very successful. The team of Bob Martin, Jim Honey (University Colorado, Boulder), Pablo Pelaez-Campomanes (National Museum, Madrid) and msu grad student Ryan Hurt, aided by four other students, processed more than 25 tons of matrix from about 20 quarries, mostly new sites. The students included Mandy Graul and Matt Richardson from msu; Jessica White, a recent graduate of Washington University in St. Louis; and Sophie Picard, an undergrad at the Université Paris, France. In addition to the sampling, we spent more time working out the complex local geology, especially in the deeper canyons near the Cimarron River, where much of the earlier part of the late Cenozoic sequence in this region may be exposed. Nick Czaplewski and Kent Smith, University of Oklahoma, joined us for a couple days to sample the nearby Oklahoma Buis Ranch locality, potentially a Saw Rock Canyon local fauna equivalent. For the big-bone enthusiasts, we have new sites that are also producing some well-preserved peccary, horse, camel, and *Borophagus* material. Our workload was dramatically reduced with the discovery that a small pond (our washing site) came with the farmhouse we rented. The Dutch/Spanish design for our washing apparatus, with an overhead PVC sprinkler system, was extraordinarily efficient.

Ryan Hurt, with us in Kansas for his second field season, will now finish picking the rodent material from a series of new localities spanning the Pliocene-Pleistocene

boundary in the Borchers Badlands (Aries and related sites), some of which he will be writing up for his Master's thesis. He will present a summary of this research in Snowbird. Cindy Gordon, now a Ph.D. student working with Rich Cifelli at Oklahoma, successfully defended her Master's thesis at MSU on variation in *Microtus pennsylvanicus* molars from a late Pleistocene cave sequence.

On the publication front, Bob Martin reports that his paper, co-authored with Ken Fairbanks, on a preliminary analysis of rodent community turnover in the Meade Basin, is still in press in *Evolutionary Ecology*, although it remains to be seen if that journal will retain its name after a recent change in publisher. Bob also wants to commend Bill Korth, managing editor of the new journal *Paludicola*, for his efforts in getting a special issue of that journal ready before the SVP meeting. The issue, edited by Bob and Alexey Tesakov, includes a series of papers on the early evolution of *Microtus*, the results of a symposium on the subject held in Moscow last fall. Copies will be available in Snowbird. (Bob Martin)

South Carolina State Museum, Columbia

This is the first submission to the *SVP News Bulletin* from the SC State Museum. As South Carolina is relatively rich in paleontological materials, this will not be the last.

The State Museum has several paleontological projects underway. Of particular note is the preparation of an (as yet unidentified) archeocete whale by Craig and Alice Healy, two museum volunteers with a great deal of preparation experience. Although "collected" by a bulldozer in the Giant Cement Plant pit, near Harleyville, SC, portions of the skull, a partial vertebral column, and some limb elements are available.

This fall we will be attacking a large screening project at a site dubbed the "Walrus Ditch." There are some Blancan taxa present, but the possibility exists that it is a mixed fauna with input from an Irvingtonian aspect. Archaic microtine rodents make this a very interesting site! It appears to have been deposited in an estuarine environment.

Starting in the spring a lengthy survey of the Wando Formation will be undertaken by the State Museum and Vance McCollum of Summerville, SC. This will involve a number of years as the deposit is extensive and the formation is rich. We already have one fauna collected and another located.

Jim Knight's interest in fossil snakes has led to a study of *Pterosphenus schucherti* from a number of new locations in southeastern U.S. Paleoecological and taxonomic studies of this taxon will be the subject in his dissertation at the University of South Carolina, which is being undertaken in addition to his full-time job at the South Carolina State Museum. He would be interested in hearing from anyone with unpublished records of palaeopheid snakes from the U.S. (knightj@museum.state.sc.us). (Jim Knight)

Midwest Region

Western Michigan University

Bob Anemone and field crew returned to Wyoming for their fifth field season in the Clarkforkian and Wasatchian of the Great Divide Basin. Although we were hammered by daily thunder storms during the fourth week of our fieldwork, we were able to locate several new and productive localities in deposits of Wasatchian age. Our geologist Jeff Over (sunny at Geneseo) spent a week with several of his students measuring strat sections and mapping a series of productive channel sandstones in the Frieghter Gap area which have been begun to yield a wide variety of Wasatchian mammals as well as several complete turtles.

Bob has two papers with Daris Swindler (Professor Emeritus, University of Washington) in press in *Human Evolution*. The first deals with allometry, heterochronic growth, and the development of sexual dimorphism in the chimpanzee skull, and the second deals with comparative dental metrics. Bob and Bert Covert (University of Colorado) are also hoping to complete their paper on the postcranial skeleton of the Eocene primate *Omomys carteri* this year. (Bob Anemone)

Southwest Region

Dallas Museum of Natural History

After much planning and hard work our temporary Dinoworld exhibit is up and running. The display is primarily of Cretaceous dinosaur skeletons supplemented by many dmnh specimens and the first mounted skeleton of *Malawisaurus*, a titanosaurid from Malawi excavated by Louis Jacobs, Dale Winkler, Elizabeth Gomani, and others from Southern Methodist University and the Department of Antiquities in Malawi. We are also grateful to the University of Wyoming for their loan of a Texas *Trilophosaurus* skeleton that we included in the exhibit.

We are happy to have Elizabeth and Dana Biasatti, another SMU graduate student, with us during this exhibition. They are assisting us in the ongoing preparation of new *Alamosaurus* material from Big Bend National Park. Dana has also been involved in the excavation, which has produced a variety of postcrania of at least two juveniles. A short report of this excavation is forthcoming in a new "Paleontology in the Parks" volume, published through the National Park Service and edited by Vince Santucci.

In addition to preparing *Alamosaurus* bones, Geb Bennett has finished the first of three skeletons to be mounted of the Proctor Lake hypsilophodontid. The mount is included with the Dinoworld exhibit. Geb is now working on the second skeleton in addition to supervising a temporary prep lab associated with the exhibit. Volunteers in this second lab are preparing a large pliosaur from the Eagle Ford Formation. Geb and Tony Fiorillo are also working with Marc McAllister at Innova International on an ongoing project to develop further possibilities from rapid prototyping, especially with respect to preparation and display.

Tony, Geb, and Homer Montgomery of the University of Texas-Dallas, participated in further excavation of the *Alamosaurus* quarry in Big Bend National Park last spring. The site continues to be productive. Later in the summer, Tony joined Roland Gangloff of the University of Alaska, and others, on the North Slope. There they investigated several dinosaur localities, some of which were remarkably rich in juvenile hadrosaur remains. Still later in the summer, Tony was joined by Dave Elliott of Northern Arizona University for ongoing work in the Lower Devonian Beartooth Butte Formation of Wyoming and Montana. (Tony Fiorillo and Geb Bennett)

Mesa Southwest Museum, Mesa, Arizona

Heidimarie Johnson has started collecting Upper Devonian placoderms near Payson, Arizona. Preliminary investigation indicates that both arthrodires and antiarchs are present at several horizons.

Doug Wolfe has a paper describing the Zuni Ceratopsid which will be published with the proceedings from the Terrestrial Mid-Cretaceous Symposium in Fruita, Colorado in October 1998. A joint Mesa Southwest Museum/Dinamation expedition is scheduled for the Zuni area in September. He is busy continuing preparation and description of Zuni vertebrate material including two new theropod dinosaurs.

Brian Curtice is continuing his pernicious assault on the Sauropodomorpha. Cataloging, quantifying, qualifying, and noting of variation (especially axial) continues apace. Recent discoveries in Argentina and Brazil extend considerably the range of the diplodocid sauropods. A *Vulcanodon* manuscript plods towards completion, as does the redescription of *Brachiosaurus*. Especially interesting is the Late Jurassic/Early Cretaceous sauropod transition and the new western North American sauropod discoveries.

Brian Anderson is awaiting the galley proofs on his *JVP* article on hadrosaur integument and continues research in several other areas.

Bob McCord feels like all his time is taken by museum matters, especially our expansion, and our annual Southwest Paleontology Symposium in January. He has found time to finish six (!) manuscripts this summer and looks forward to a fall field season in the Upper Cretaceous of southern Arizona. (Robert McCord)

Rocky Mountain Region

Garden Park Paleontology Society dba Dinosaur Depot

The newly trained field and laboratory volunteers at Dinosaur Depot have been deep into finding more specimens in the Garden Park Fossil Area last fall and this summer. In fact, we have not been able to see the forest for the tree! This spring, while conducting a tour, this volunteer was shown by a teenager what appeared to be a beautiful small (20 × 30 cm) chunk of petrified Jurassic wood, rare for this area. Upon closer inspection and a little excavation, this became a log -- all 3.5 m of it. Our excavation-starved volunteers

finally had something to sink their picks, shovels, and jackhammers into. In a furious ten days of digging within view of the public (the log was a mere 30 ft from the road), it was removed in five good-sized jackets. But wait, there's still more -- of the log, that is. The "end" of our dig is not the end of the log and we will see how much tree is still remaining in September when we continue the excavation. Identification of the log as to type of tree will take place this fall as well. As far as we have been told by Kirk Johnson, the paleobotanist on our Scientific Advisory Group, this is the largest and possibly oldest Jurassic log in eastern Colorado. It will make a wonderful addition to the work that continues in the lab. Donna Engard, Curator of Paleontology, continues to conduct field-training classes, as well as training additional lab volunteers and curating the accumulation of additional finds made by our volunteers in the past year. We are finding more invertebrate sites and charophyte localities, as well as additional sauropod material from an old historic quarry worked in the 1890s south of Cañon City.

Some of our trained volunteers were able to experience work in the Powder River Basin of Wyoming under the direction of Peter Robinson for a change of pace. They got knee deep in an irrigation ditch on a sheep ranch in order to see first hand the "excitement" of washing matrix in burlap bags in the hot sun! And some of our ladies -- as this volunteer - - actually enjoyed it. It takes a special "breed" to get into paleontology and fortunately some of us are hooked.

Also this summer a few of our trained crew made a presentation at a Management of Paleontological Resources seminar sponsored by the U.S. Forest Service and Bureau of Land Management in Grand Junction, Colorado. They will also be attending the Public Lands Fossil Conference in Rapid City, South Dakota, in the fall with us as well. It is gratifying to see new amateur faces helping gpps with its continuing mission of protecting and utilizing the Garden Park Fossil Area. We continue our weekly survey of the area, as well as tours and education in same. (Pat Monaco)

Sheridan College, Sheridan, Wyoming

This has been a very busy summer field season. The Sheridan College Jurassic Dinosaur Quarry has had a number of svp members stop in to help with our ongoing excavation work. Chris Ott and David Jonce helped a good deal both in the field and back at the College's prep lab. The summer included two college credit courses located within the Cloverly and Morrison formations of northern Wyoming and southern Montana. Mike and Brian Flynn continue their inventory of fossil localities along the western Powder River Basin. John Bracey and Brian Flynn have put to use new grant money in our ongoing remodeling of our fossil prep lab. gis interfaced with gps has worked well in the updating of fossil localities within the Hell Creek Formation of southeastern Montana. Plans for the fall field season of 1998 include three college field courses located at the college's Cloverly/Morrison quarry, and continuing our field research within the Cloverly and Hell Creek formations, Big Horn, Powder River, and Carter counties, Montana. (Mike Flynn)

University of Colorado Museum, Boulder, Colorado

After successful fund-raising efforts over the last several years, we have finally reached the architect stage of planning for our new building which we hope to occupy sometime in early 2001. The "new" building, actually a newly renovated existing building which formerly housed the Department of Geological Sciences, will house most of the museum's natural science collections (paleontology and osteology, zoology, entomology, and arachnology), its research facilities, and its museum and field studies graduate program.

The paleontology and osteology collections are now in the second year of a three-year NSF Collections Improvement Project, and signs of our efforts are gradually becoming visible in the collection. Last year almost 11,000 specimens of mostly backlogged Eocene vertebrates of the Rocky Mountain Region were identified, catalogued, and housed. By the end of the third year, we hope to have curated all backlog, upgraded the entire paleontology and osteology collections, and thus be ready to move into a facility more worthy of a museum collection (those who have visited our current building will understand this sentiment).

With the fall semester now kicking off and everyone back from the field, we are now kicking into high "curation" gear again while looking forward to the day when the end of the backlog is in sight. Collection Manager Paul Murphey will be recalling all overdue loans in the next 12 months, so if you have an overdue loan from UCM, it would be greatly appreciated if you would return the loan or request an extension before the recall letters are mailed out.

Curator Peter Robinson spent most of the summer in the field collecting for his own research projects and teaching the museum's field school in western Colorado. Peter reported modest finds of fossils and the discovery of a number of stratigraphically important localities. Bert Covert had a good first trip to Viet Nam in terms of preliminary reconnaissance, and hopes to spend more time collecting there next summer. Paul Murphey, Emmett Evanoff, and Leonard Brand are continuing a cooperative geologic mapping project with the BLM for Tertiary rock units of the southern Green River Basin, Wyoming. The fieldwork for the project is almost complete, and the data is being digitized at BLM's NARS facility in Denver for planned completion sometime in 1999. In addition, Paul is continuing to write his dissertation and hopes to finish his doctoral fieldwork in the upper Bridger Formation this fall. Emmett Evanoff is teaching a variety of classes at the University of Colorado and the Denver Museum of Natural History, while continuing research projects in Badlands National Park, the Bridger Basin, and the Kremmling giant ammonite site in conjunction with the Denver Museum of Natural History. John Foster recently completed his dissertation and graduated, and is now working on a project with the Utah State Geological Survey. Doctoral student Lisa Torick is researching dissertation topics and preparing for her prelim exams later this year. Master's degree students Jon Bennett, David Daitch, and Melissa Burke are continuing with work in their thesis projects. (Paul Murphey)

University of Wyoming, Laramie, Wyoming

Jay Lillegraven and Mike Cassiliano are pleased to announce that they have been awarded an NSF Collections Improvement Grant. This two-year award will allow us to curate the entire collection of fossil vertebrates here at the University of Wyoming. At the completion of the grant, we hope to have all specimens identified to some taxonomic level and given specimen numbers, update locality data, have the specimens arranged in a logical and usable manner, create a complete computerized specimen and locality database using Filemaker Pro, and have the specimen catalogue available on the Web. A major consequence of this grant is that we will be recalling all loans. This is necessary so that we can give specimen numbers to uncatalogued specimens and reserve storage space for those specimens. If you receive a recall letter, but still require the specimens for use, we will return the specimens after they have been curated. We would really appreciate updated identifications for any specimens that you have on loan.

Mike Cassiliano's paper on the biostratigraphy of the Fish Creek-Vallecito Creek fauna from the Anza-Borrego Desert will soon be published in a future issue of *jvp*. He also has a paper in review with the *Bulletin of the Southern California Academy of Sciences* that revises and stabilizes the stratigraphic nomenclature of the Palm Spring Formation in southern California.

This summer's visitors included Judy Massare (SUNY Brockport) and Emily Buchholtz (Wellesley College) to study our specimens of *Baptanodon*, David Froelich (UT Austin) to study our middle and late Eocene equids, Tony Fiorillo (Dallas Museum of Natural History) to study Devonian fish, and Howard Hutchison, Pat Holroyd, and Tom Stidham (University of California Berkeley) to browse, study, and borrow Paleogene turtles, Cenozoic birds, and whatever interested Pat.

We are very grateful to Beverly Calloway, wife of the late Jack Calloway, for donating his reprint collection to our Vertebrate Paleontology Reprint Collection.

The Department of Geology and Geophysics has changed the name of the biannual journal from *Contributions to Geology* to *Rocky Mountain Geology*. We invite you to submit manuscripts for publication that deal with the vertebrate paleontology of the Rocky Mountain region.

The beginning of the fall semester marks the end of frantic mammal tooth identification for Pennilyn Higgins. The next year will be spent writing her Ph.D. dissertation. A heavy class load and writing her Master's thesis in geochemistry will hinder her progress on this for a while, but all appears to be on track. Penny still plans to defend her dissertation early in the fall of 1999 and expects to present her results at the SVP 1999 annual meeting.

John Burris remained busy this summer by teaching the introductory geology class and working on his research. He has completed several revisions on his thesis, entitled "Evidence for Reworking of Cretaceous Elasmobranch Teeth and Implications for the Provenance of the Paleocene Hanna Formation," and will be defending in a few weeks.

Brent Breithaupt (UW Geological Museum) is directing the fossil track investigation of a new Middle Jurassic dinosaur tracksite in northern Wyoming. The Red Gulch Dinosaur Tracksite is located in the Sundance Formation on land administered by the Bureau of Land Management. Erik Kvale, an Indiana Geological Survey geologist, found the tracks in the spring of 1997. Elizabeth H. Southwell (US Geological Museum research assistant) and various students (Thomas Adams, Karin Kvale, Debra Mickelson, Ty Naus) are assisting Breithaupt. Initial findings indicate that most of the footprints were made by theropod dinosaurs that traveled across a tidal flat 165 million years ago. In-depth site research began this summer to uncover the tracks and map the 40-acre tracksite. The Red Gulch Dinosaur Tracksite will provide opportunities for students interested in paleontology, geology, and geography and recreation.

Other scientists working on the site are Kvale, James O. Farlow (Indiana-Purdue University), Michael Brett-Surman (Smithsonian Institution), Allen Archer (Kansas State University), Neffra A. Matthews (National Applied Resource Sciences Center), Gary Thompson (Rocky Mountain College), and Gary D. Johnson (Dartmouth College). (Brent Breithaupt)

West Coast Region

California State University, San Bernardino

It has been a number of years since CSU San Bernardino's last submission and much has happened during that time. Stuart's edited volume "Amniote Origins" (co-edited with Karen Martin at Pepperdine University) was published by Academic Press at the end of 1997. So far the response has been positive enough to convince Stuart that it was worth the effort (although it will take a lot of convincing to get him to do another!) Stuart co-authored one chapter with Karen, co-authored another with Dave Berman (Carnegie Museum of Natural History) and Eric Lombard (University of Chicago), and wrote one for it himself. Enough time has elapsed since the last submission to make it look like a lot of other things have been published as well. With Dave and Thomas Martens of the Museum of Nature in Gotha Germany, Stuart has described a new trematopid amphibian, *Tambachia trogallas*, and a new species of *Diadectes*, *D. absitus*. Both are from the Lower Permian Bromacker locality that Dave and Stuart have been working on for the past five years. The former was published in *Palaeontology*, and the latter in *Annals of the Carnegie Museum*. Also in the *Annals*, Dave, Amy Henrici (Carnegie Museum of Natural History), and Stuart published on juvenile specimens attributable to *Diadectes*. In conjunction with the volume on Utah fossils to be released for the 1998 SVP meetings, Stuart contributed three papers on Paleozoic vertebrates of Utah: one on the fishes (with Gavan Albright of csusb and Elizabeth Rega of the Claremont Colleges), one on the amphibians (with James Walliser of csusb and Eric Lombard), and one on the amniotes with Dave, Amy, and Eric.

The past two summers have been heavy with fieldwork. Stuart continues to go to eastern Germany with Dave and Amy to work on the Bromacker locality. It continues to turn up spectacularly preserved Lower Permian tetrapods and the National Geographic Society

has provided four years of support thus far. Beth Rega was along for the 1998 trip and provided her expertise in German translation, as well as welcome manual labor in the quarry. Dave Eberth of the Tyrell Museum represented the Canadians as he did a complete workup of the sedimentology of the Bromacker. In addition to the German work, Stuart has been in Utah the past two summers. Last summer saw us intersecting with John Bolt, Eric Lombard, and about 15 students -- all hand-picked by Eric. Beth Rega joined us from the Claremont Colleges with her student Deborah McPhearson and Stuart brought along his grad students Gavan Albright and James Walliser. This summer's trip was decidedly smaller, and could be better described as a scouting trip.

Student work is increasing at csusb in a variety of ways. James continues his thesis work on the postcranial skeleton of the diadectomorph *Tseajiaia*. To this end he visited Dave at Carnegie Museum to borrow more specimens. Gavan is organizing his proposal to restudy the skull of the tiny captorhinid reptile *Captorhinikos parvus*. The work will be based primarily on skulls collected but never described by Everett Olson.

Although Stuart has always looked to the Paleozoic for his research, he's been bitten by the Mesozoic of late. He was named to represent the California State University in their effort to aid in the preparation of Sue, the *Tyrannosaurus rex* recently acquired by a consortium that includes the Field Museum of Natural History, the Walt Disney Corporation, McDonalds Corporation, and the California State University. Stuart has been responsible for training csu students to help with the preparation and educational interpretation for Sue, and with the help of Kathleen Devlin has been developing the csu Web presence for the project. Four students were sent as the first wave of csu students to the Field Museum. Bronwyn Weis was part of the Chicago crew, and in addition to providing educational interpretation for Sue, helped prepare some of the Madagascar fossils currently at the Field. Heidi Cruz also provided educational interpretation and provided content for the Field Museum's Web site for Sue. James Walliser helped with Sue's prep along with John Tometich, an art student at csusb. John will help with mounting specimens at csusb later this year, and just finished mounting a sabretooth cat leaping from its hind limbs for our collections. All four stayed at the University of Chicago's International House for the tenure of the summer project. Up to six csu students will be involved with the Sue project next summer.

Stuart continues his work with various film studios. He just finished work on Mulan last year for Disney, and is currently working with Sony Pictures Imageworks on Stuart Little, as well as a number of as yet unnamed projects for Disney. (Stuart Sumida)

George C. Page Museum

The annual Pit 91 excavation proceeded apace under Chris Shaw's watchful supervision and with Meghan Meyer acting as lead excavator. The first six weeks yielded some 600 specimens, including sabertooth, lion, and dire wolf skulls. Jerry Smith, our previous lead excavator, will for the remainder of the year act as paleomonitor to mitigate fossil

deposits uncovered by the Hancock Park Renovation Project. This \$10-million scheme will provide a perimeter fence around the park, new fences and notices for the tar pits, and new paths, lawns, lights, and trees elsewhere in the park. So far 26 new sites, three of them major, have been documented during the course of construction activities but most have been left for future excavation. The place looks somewhat like a WWI battlefield at the moment but should be verdant and beautiful by May 1999. Access to the museum, and of course to the collections, supposedly will remain unhindered during the course of the park renovation.

Shelley Cox and her volunteers have nearly completed the initial preparation of specimens from the early (1913-30) excavations; their final task in this exercise is to complete the fitting together of *Smilodon* rib fragments from the 1908 Academy excavation. They will then be able to turn their attention to the backlog of materials from Pit 91. Shelley and John Harris have been trying to find a viable substitute for 1-1-1 trichloroethane in the preparation of microfossils from asphaltic matrix. Thanks to some suggestions from readers of the museum's magazine (*Terra*); they have at last identified a couple of chemicals that seem to match the effectiveness of trichloroethane.

Chris Shaw is working with Fred Croxen (Arizona Western College) on newly acquired Irvingtonian fossils from El Golfo de Santa Clara in Sonora, Mexico. Under Chris' supervision, Ted Connors has completely organized the *Megalonyx* and *Nothrotheriops* specimens and has made great progress with the *Paramylodon* materials. Cathy McNassor, Page Museum archivist, has been promoted/sentenced to be in charge of the Natural History Museum of Los Angeles County archives; henceforth she will be based mainly in Exposition Park, but will continue to maintain the accessibility of the Page archives. (John Harris)

Los Angeles County Museum of Natural History

Although the curatorial staff have returned after the 1993 purge, we lost our sole remaining preparator in 1996. As a result, collecting activities have necessarily been curtailed. However, Dave Whistler has continued his long-standing efforts in the Dove Spring Formation. During the past year a heavy flood destroyed most of his processing facilities and even a few specimen jackets in addition to destroying the State Park headquarters. With Bruce Lander, Tom Kelly, Mark Roeder, Gary Takeuchi, and others, Dave has continued to work on salvage collections in the Sespe and Saugus formations. This year Tom Kelly and Dave published their paper on the eomyid rodent *Metanoiamys* from the Sespe Formation. In addition, for yet another time, Dave managed a reshuffling of our fossil exhibits.

After the 1997 SVP meetings Larry Barnes nearly died from an undiagnosed case of Rocky Mountain Spotted Fever. He has recovered completely and is back into the full swing of marine mammal activities. In addition to his continuing work with Mexican colleagues on the fossil marine mammals south of the border, Larry has worked with Sharktooth Hill Foundation on preservation, recovery, and display of specimens from the

Sharktooth Hill Bonebed. In August Larry joined Museum Associates Daryl Domning, Jim Goedert, and Francisco Aranda-Manteca for a conference in Japan on desmostylians.

At this writing J. D. Stewart is in Kansas pursuing a *Xiphactinus* from the Carlile Shale. In addition, J. D. continues his studies of fossil fishes and sharks from various ages and locales.

After the Anza-Borrego collections were repatriated to the State Park last year (the third major collection to be taken from our VP holdings), Sam McLeod worked with several volunteers to reshuffle the collections to create desperately needed expansion space. Unfortunately, the space was required for existing collections that had been stored elsewhere. Sam has continued to assist the Invertebrate Paleontology Section (now down to a part-time collection manager) with their collection record computerization. Sam had managed the ip nsf computerization grant after the original grant authors were laid off in 1993. Sam has also continued to work on replacing deteriorating labels on specimens, drawers, boxes, and jackets that are stored in the basement and at two warehouses.

We welcome Michael Berkoff as a student associate studying sea lions with Larry Barnes. Michael will begin his graduate studies this fall at ucla with Blaire Van Valkenburgh while continuing to work with Larry and the lacm collections.

Gary Takeuchi has been assisting the VP program under support provided by eir salvage operations. Gary and Museum Associate Richard Huddleston are nearing completion on the identification of a large collection of late Miocene deep-water fishes, including unique and rare taxa, as well as numerous otoliths both isolated and in situ, collected during construction of the Los Angeles Metrorail subway system. Gary and Richard are also well into their current research project on fossil chimaeroids from the Tertiary of Southern California. (Sam McLeod)

Occidental College, Los Angeles, California

Don Prothero just came back from fieldwork in the Pacific Northwest, mainly concentrating on the marine Eocene, Oligocene, and Miocene. He obtained paleomagnetic sections through the famous marine-mammal-bearing Astoria Formation near Newport, Oregon, and the Pysht and Clallam formations along the Straits of Juan de Fuca. He also finished sampling the upper part of the section at Blackhawk Ranch. Results should be ready by early next summer.

Don just received a \$30,000 NSF grant to work on the Miocene of the Caliente Range, where marine beds interfinger with nonmarine beds bearing five successive (Arikareean-Hemphillian) Miocene land mammal ages. This is in addition to recent grants from the PRF and NSF -- first time he's ever had three grants running concurrently!

Don's five chapters in the Janis et al. Tertiary Mammals volume just appeared, and a number of other papers are also in press or have just been published. Reprints will be sent to his regular mailing list pretty soon. (Don Prothero)

Ralph B. Clark Interpretive Center, Orange County, California

It's been a long time since our last report. We have many new things to update you about.

First off, we've had some personnel changes. Steve Conkling is no longer with the County. He has left to go work in the private sector in mitigation. He is now the Director of Archaeology and Paleontology at an environmental consulting firm here in Orange County. Replacing him as head of the Interpretive Center is Lisa Babilonia. Lisa has a diverse background in museum work (at lacm), teaching, and mitigation fieldwork. Also new to the County, but not to the Interpretive Center, is Jay Michalsky. Jay runs the Center on the weekends; his experience comes from nine years as a volunteer here. During the week, Jay does mitigation fieldwork.

The County bankruptcy two years ago took its toll on the volunteer program here at the Center. Some hardy volunteers weathered the crisis, and we even gained a few new volunteers. We are indebted to those who have hung in with us: Hilda Schinhofen, Brian Kussman, Liz Madsen, Maggie Hart, Jan Siegel, and Shannon Siegel. Mike and Jean Hudson, cornerstones of our volunteer program, have curtailed their volunteer activities recently, but they still drop by occasionally to check up on us.

This year marks the tenth anniversary of the Interpretive Center. We're planning a celebration later this year just before the svp meeting. It's hard to believe it's been ten years!

Our first decade was spent developing programs and exhibits for the Interpretive Center, and on excavating in our terrestrial unit. We've collected quite a lot of material out of the La Habra Formation, and now it's time to do some science. Recently, some visitors have dropped by to aid us in making our collection more user-friendly. Mark Roeder is helping us with fish identification. Hugh Wagner came up from San Diego and looked at hundreds (at least it seemed like hundreds) of *Microtus* teeth. Denise Gilbert, a grad student at California State-Fullerton, is fine-tuning our herp material. Her thesis work is a comparative study of fossil reptiles and amphibians from various Southern California localities. Dick Hilton from Sierra College is gathering info on dinosaurs and other Mesozoic reptiles from California; he dropped by recently to look at the two hadrosaur specimens we have on display.

Orange County's most impressive and complete whale fossil is on display at the Interpretive Center. Larry Barnes from lacm was intrigued enough to stop by and check out "Joaquin the Whale." Joaquin is a late Miocene baleen whale retrieved from a road construction project.

Jay is building up our library. He has been inundated by catalogs of publications, and we are ever hopeful that the County will open its purse strings. Jay would appreciate any leads on papers pertaining to the Irvingtonian-Rancholabrean boundary.

Lisa has finished her coursework at California State-Long Beach and is focusing on the fieldwork aspect of her thesis. Her topic is on the sedimentology and stratigraphy of the La Habra Formation. Lisa hopes to clarify the depositional history in order to better establish the paleoecology of our area.

The education does not stop there. Several of our volunteers are pursuing an education in paleontology. Brian has expressed interest in studying the *Palaeolama* material, and Liz has her eye on the gastropods. Two papers are currently in the works regarding Clark Park and its prehistory. The first is a "science-lite" report about our site and its paleobiota. Jay and Steve plan to submit this paper to *California Geology*. The second paper, by Steve and Don Maurer (California State-Long Beach), is more scholarly and describes the paleoecology of our marine unit, the San Pedro Formation.

We welcome any inquiries regarding our facility, and our doors are always open to visitors. (Jay Michalsky and Lisa Babilonia)

University of Alaska Museum

A University of Alaska Fairbanks/Anchorage team led by Roland Gangloff and Anne Pasch has completed an expedition to the northern foothills of the Brooks Range of Alaska that resulted in a significant collection of dinosaur tracks and trackways. Casts and impressions of at least six different taxa (five dinosaurs and one unidentified vertebrate) were found in exposures along the Colville River. A total of 13 new track sites were located along a 75-mile stretch of the Colville River in the National Petroleum Reserve-Alaska. These trackways and trampled surfaces are at least 25 million years older than the well-known dinosaur bone beds reported near Ocean Point which are over 200 miles to the east and north. The expedition was made up of faculty and students from the geology departments of the University of Alaska Anchorage and Fairbanks, as well as personnel from the University of Alaska Museum.

The tracks represent theropods, ornithopods, and either ceratopsians or ankylosaurs. The longest track measures 18 in and has three large toe impressions. Most tracks are three-toed. Four-toed tracks were the most surprising along with the presence of pebbly skin impressions on the surfaces of the tracks. The abundance and diversity of the tracks and trackways in Upper Albian to Lower Cenomanian rocks of the coal-rich Nanushuk Group strongly suggests that dinosaurs were common in the high latitudes of North America long before their record of abundant skeletal remains appear.

Tony Fiorillo of the Dallas Museum of Natural History joined the Alaskans on the second half of the expedition and is greatly excited about working with Roland Gangloff on the taphonomy of the dinosaur-bearing beds all along the Colville River. Tony was involved with the documentation of recently discovered bone beds containing pachyrhinosaur, hadrosaurs, and at least three different theropods. (Roland Gangloff)

University of California, Museum of Paleontology, Berkeley

We knew it was time to send another installment of "VP in Berkeley" off to the *SVP News Bulletin* when we realized that our last contribution commented on Tony Barnosky's then recent departure. Tony now reports that he is glad to be back at Berkeley and relatively free of administrative duties, which consumed him during his tenure as Director of the Mountain Research Center at Montana State University over the past three years. Current research projects include finishing up various manuscripts on the Porcupine Cave project and the Miocene of the northern Rockies, and initiating a new project (with collaborators Liz Hadly, Brian Maurer, and Miguel Christie) aimed at identifying what controls mammalian biodiversity in two matched ecosystems, one in Greater Yellowstone and the other in northern Patagonia. Tony will be accepting one or two graduate students at Berkeley starting in 1999-2000, so interested students are encouraged to apply. Jane Mason is now celebrating her one-year anniversary as senior preparator at ucmp. She has made a serious dent in our backlog of molding and casting and reports that she is enjoying the opportunities to broaden her paleontological expertise. The odd invertebrate or plant megafossil has been appearing under her microscope, and Jane and one of our paleobotany grad students, Caroline Stromberg, will have a presentation on replication of plant megafossils at gsa this fall.

This summer saw yet another field trip into the Cretaceous-Tertiary outcrops of eastern Montana. The VPs, Bill Clemens, Greg Wilson, Harley Garbani, and Mary Smith joined forces with a crew with paleobotanical-geochemical expertise, including Nan Arens (Professor and Curator of Paleobotany at ucmp), her students Anna Thompson and Helen Pogral, and Hope Jahren and Bill Hagopian from Georgia Institute of Technology. For the McCone County phase of the trip they had the pleasure of joining Don Lofgren's crew from the Webb School. Among the products of their summer's work was sampling of Cretaceous and Paleocene localities where there is a clear and close association of floral and faunal remains.

With Yuanqing Wang, Yaoming Hu, and Chuankuei Li, Bill Clemens completed a study of what appears to be an upper molar of the curious pseudo-tribosphenic mammal, *Shuotherium*. The paper is scheduled to be published in *JVP* late this year.

In January 1998, Mark Goodwin, along with Howard Hutchison, Charles Schaff (Harvard), and C. B. Wood (Providence College), returned to Ethiopia to continue exploring the Upper Jurassic Mugher Mudstone exposed in the Blue Nile Gorge on Ethiopia's northwestern plateau. Mesozoic mammals to date remain elusive but new fossil localities are yielding teeth of carnosaurs, ornithischians, crocodilians, and sharks, as well as bones of dipnoans, fish, and a diverse turtle fauna. The fauna, new records, and range extensions for this diverse assemblage is currently being described in a multi-authored manuscript just about ready to resubmit to *JVP* according to Goodwin and Clemens. While in Ethiopia, Goodwin, Hutchison, Schaff, and Wood flew to the northern Province of Tigray to explore Mesozoic deposits exposed west of the capital city of Mekelle. Here, the Adigrat Formation is mapped as Upper Jurassic but by all indications, the sediments appear to be Late Triassic. The crew found many new sites that yielded abundant amphibian remains, including a new species of a temnospondyl named for the

nearby village of Abi Adi. The manuscript, with Anne Warren as senior author, is currently in press in *Neues Jahrbuch for Geologie und Palaontologie*.

Mark Goodwin continues to work on pachycephalosaurs and wrestle with the notion of a kinder and gentler pachy. New material, including the most complete skull of *Stygimoloch spinifer* and additional cranial and postcranial elements of this "horned" pachy from ucmp, amnh, and mpm collections, was described by Goodwin, E. Buchholtz (Wellesley College), and R. Johnson (Milwaukee Public Museum) in the June *JVP*.

Mark spent two weeks in Montana this summer working with Jack Horner in the Museum of the Rockies and in the field. Mark and Jack made a lot of progress on their cranial histology study of pachycephalosaurs, collecting data on a suite of characters from a growth series of *Stegoceras* and making comparisons with *Stygimoloch* and *Pachycephalosaurius*. Results will be given in a talk by Horner and Goodwin at the 1998 meeting. While in Bozeman this summer, Mark, Jack, and Bill Clemens also worked on their manuscript on the new and smallest ceratopsid skull found by Harley Garbani in the Hell Creek Formation and reported on at the SVP meeting in Chicago. The skull reveals a great deal of new information on the ontogeny and cranial morphology of such a young *Triceratops*. Additional undescribed juvenile material of *Triceratops* from the mor collections will be included in their study.

Mark and Jack returned to the Judith River Formation along the Canadian border north of Rudyard, Montana, in July. Many stories were told and toasts were made both at Egg Mountain and in the Bank Bar, Rudyard, Montana. Bob Makela was remembered fondly and there's just not enough space here to describe Bob, his friendship, and his many contributions to paleontology and beyond. On a sad note, Don Klein, owner of the Bank Bar, good friend, and general overseer of all bonediggers that worked in the Rudyard area, passed away at the end of July after a two-year battle with cancer. He will be missed. Back on the outcrops, Mark and Jack traced the Judith River Formation from Rudyard east to Havre sites along the Milk River, crawling over a lot of caliche zones and generally having a good time collecting "ducks".

Pat Holroyd continues to concentrate on the Eocene, both foreign and domestic. Last winter, she and Russ Ciochon (University of Iowa) returned to Burma (Myanmar) for museum and fieldwork with a team led by Tin Thein (Taunggyi University) and Aye Ko Aung (Dagon University). Fossils from the work are being curated and displayed in the new fossil hall at the National Museum of Myanmar in Yangon. The fieldwork has resulted in a much improved understanding of the stratigraphy of the Pondaung region, and provided a host of new fossils for study. Devotees of the African Eocene will also be pleased to hear that she has finally gotten some of those malingering manuscripts on Fayum mammals off for review. More locally, Pat and Howard Hutchison have spent the past few summers pulling together some loose ends in the biostratigraphy of the Greater Green River Basin in order to have an adequate framework within which to address questions about the biogeography and comparative paleoecology among Wyoming's Eocene basins. They presented the results of their work in the northern Green River Basin at last year's gsa; this year an analysis of differences among the chelonian faunas will be

on tap at SVP. Howard Hutchison, Pat Holroyd, and Jeff Eaton (Weber State University) continue their collaborations on the late Cretaceous and Paleogene of south-central Utah.

Initial reports (with varied co-authors) should appear this fall on the Duchesnean fauna from the Brian Head Formation and on the nonmammalian late Cretaceous vertebrates from the Campanian Kaiparowits and Wahweap formations as part of Gillette's Utah vertebrates volume and in a special publication on research in the Grand Staircase-Escalante National Monument. Howard also has studies scheduled for fall release on Eocene turtles from Saskatchewan (with John Storer), Paleocene turtles from South Carolina (with Robert Weems) and turtle diversity across the Paleocene-Eocene boundary. In a few weeks Howard will be off to China with the Carnegie crew to hunt down Eocene vertebrates in the southern provinces. Kevin Padian's more recent projects have included the Encyclopedia of Dinosaurs, with Phil Currie and a host of great contributors; a translation of Philippe Taquet's *L'Empreinte des Dinosaures* ("Dinosaur Impressions"), which Cambridge is releasing at the SVP meeting; and a bunch of other paleo, historical, and miscellaneous projects. These include a description of the Kayenta Formation microvertebrates with Kent Curtis; papers on the bone histology of pterosaurs and of *Maiasaura* with Jack Horner and Armand de Ricqlès; and reviews of the origin and early evolution of birds with Luis Chiappe (in the Encyclopedia of Dinosaurs, *Scientific American*, and *Biological Reviews*). A piece with Borjana Mikic and Dennis Carter on epigenetic mechanical factors in the evolution of long-bone epiphyses has just come out in *Zoological Journal of the Linnean Society*. His undergraduate researchers, Russ Main, Jason Rosenbaum, and Rocky McGowen, are keeping the lab hopping. For updates of publications and more recent doings in the Padian lab, consult their Web page: <http://www.ucmp.berkeley.edu/people/padian/webintro.html>.

Berkeley has benefitted from a series of post-docs the past few years. Kevin Padian's lab profitted from a two-year stay by Michel Laurin as a nerc post-doc from 1994-96. Michel fine-tuned his cladistic analyses of early tetrapods and left us, first for a one-year stint in Paris, and then to take a Humboldt Fellowship in Berlin. That concluded, Michel is now returning to Paris to take a permanent job with the cnrs, and we wish him all the best. Since Michel's absence, Ryosuke Motani has joined the lab as a Miller Postdoctoral Fellow (1997-99), and Ryosuke is going great guns on his ichthyosaurs. His current projects are concentrated on the basal ichthyosaurs, including their phylogenetic relationships, ontogeny, and functional morphology. He is bringing what he knows of the earliest forms to a close scrutiny of our western Triassic specimens, which have needed revision for many decades.

Last fall Clara Stefen, from Bonn and Stuttgart, also joined us and has been using the museum's environmental scanning electron microscope to full advantage. She is in the midst of a comparative study of the enamel microstructure of Paleocene eutherian omnivores-herbivores, trying to sort out the functional and phylogenetic inputs that controlled its structural differentiation. Additionally, she has been continuing her systematic study of European beavers.

Anne Weil has continued her investigations of the evolutionary interrelationships of North American cimolodontan multituberculates, which certainly were within the splash zone of the creator's "inordinate fondness." Her paper on the microcosmodontines is in press in *PaleoBios* and should be out this fall. When it comes to revealing their broader phylogenetic affiliations, she found that the multis continue to be ornery but may yield to cladistic pressure. This fall, Anne moved to Duke where she is will be teaching and continuing her research in the Department of Biological Anthropology and Anatomy.

Joe Skulan has taken a job back in his homeland of Wisconsin and can be reached at the UW-Madison Museum of Geology while he finishes his dissertation; he has just submitted his paper on why tetrapods came onto land (discussed at SVP a few years ago) and is writing up the results of his calcium isotope work.

John R. Hutchinson has been refining his 3-D computer simulations of the hind-limb stance of *Tyrannosaurus rex*, dissecting myriad Reptilia, and writing a long paper (or two?) on hind-limb muscle evolution in saurians. John received a DinaMation International Fellowship, another fellowship from ucmp, and an offer from Steve Gatesy to work with him for a semester at Brown, where he is working on "sundry aspects of theropod femoral trochanters, Sharpey's fibers, muscle function, and such" as this word is published. John and Luis Chiappe recently saw into print their note in *JVP* on the first confirmed alvarezsaurid from North America, and John (with Kevin Padian and Tom Holtz) also finished revisions on the theropod nomenclature paper, also with *JVP*. John was a useful contributor and resource for a number of pieces in the recent Encyclopedia of Dinosaurs. Tom Stidham continues his work uncovering the diversity of Late Cretaceous and early Cenozoic birds, which was considerable. Jim Parham passed his orals and is redoubling his efforts in the world of turtles, living and dead. Jim and Tom are also collaborating with Dick Hilton (Sierra College) on descriptions of new Cretaceous finds from central California.

After spending last fall in Africa with Paul Sereno's crew, Greg Wilson arrived in January to begin his graduate studies. Among other projects Greg has begun analyzing the Paleocene diversification of periptychids. This fall, Ken Angielczyk has joined our group from the University of Michigan. Although he has been describing new Eocene Pakistani crocodylians with Phil Gingerich, he now wants to turn his attention toward ucmp's dicynodonts. (Pat Holroyd, Kevin Padian, Bill Clemens, Mark Goodwin, and Tony Barnosky)

University of Oregon, Eugene

Greg Retallack continues work on Kenyan Miocene ape habitats. An expedition last summer (1997) was full of adventure. Who could forget the front of a flash flood that lapped the wheels of our last jeep as it climbed out the other side of a formerly dry stream bed, or the conga line of native song and dance welcoming our canoe to Maboko Island? We have now added a variety of paleosol localities to our geographic and temporal coverage: Maboko, Majiwa, Kaimagool (all 16 Ma), and Serek and Kapsibor (both 14 Ma). Ape environments indicated by paleosols are turning out similar to those indicated

by Martin Pickford's (1995) assessment of the fossil snails at these localities. Laboratory studies continue on specimens from these new sites, and general works have been submitted on early African grasslands and the unique woodland vegetation they replaced.

Jonathan Wynn is a veteran of last year's trip and this summer (1998) just returned from a month in west Turkana, northwest Kenya, with Meave Leakey, Louise Leakey, Frank Brown, Ian MacDougall, and Patrick Gathogo. He examined the 2.5-3.5 Ma Nachukui Formation for paleosols and their paleoenvironmental implications. They are very similar to paleosols of the same age on the other side of Lake Turkana, and include spectacular catenas of paleosols buried by dated rocks. His Ph.D. here at Oregon will continue his Master's research on Neogene paleosols and paleoenvironments of human evolution in Turkana.

Evelyn Krull is another of Greg's Ph.D. students, but she expects to graduate this fall. Her thesis research was on the great Permian-Triassic extinction in Antarctica. It was very hard on reptiles, as well as on plants, and Evelyn's isotopic studies show that it was abrupt and may have involved catastrophic methane release. Evelyn and former student Erick Bestland have also been applying isotopic studies to the paleosols of Rusinga Island, Kenya, famous for the early catarrhine *Proconsul*. A significant carbon-isotopic shift between Rusinga Island and Fort Ternan supports other evidence from the paleosols for a drier climate at Rusinga (18 Ma) than Fort Ternan (14 Ma), and a surprisingly dry climate for any kind of ape. (Greg Retallack)

-- **Bulletin Board**

COLLECTION OF FOSSIL VERTEBRATES AT THE UNIVERSITY OF WYOMING

We are pleased to announce that a collections improvement award from the National Science Foundation has been made to the University of Wyoming. The two-year grant will make possible a complete cross-check and updating of all specimen-related data within the Collection of Fossil Vertebrates. We will make every attempt to maintain full specimen accessibility for external users of the collection. We do, however, solicit your patience and active cooperation during progress of the work. Most extant loans, for example, will need to be recalled, albeit briefly, for inventory and possibly minor preparation. Any relevant correspondence should be addressed either to Dr. Jason A. Lillegraven (Faculty Curator of Scientific Collections; bagpipe@uwyo.edu), or Dr. Michael L. Cassiliano (Collections Manager; mcassil@uwyo.edu), Department of Geology and Geophysics, University of Wyoming, Laramie WY 82071-3006.

-- **Calendar of Events**

MAJOR EVENTS IN EARLY VERTEBRATE EVOLUTION -- PHYLOGENY, PALAEOLOGY AND DEVELOPMENT

Natural History Museum, London, England, 8-9 April 1999.

Convenor: Dr. P. E. Ahlberg

Our understanding of the origin and early evolution of vertebrates is advancing rapidly, not only due to new fossil discoveries and phylogenetic analyses, but also to discoveries in developmental genetics. This conference, sponsored by the Systematics Association and the Natural History Museum, will bring together leading workers from paleontology, developmental biology, and comparative anatomy to address the major questions in this field.

The story of vertebrate origins is the story of how the various vertebrate body plans, and the developmental cascades which generate them, were assembled by evolution. General problems include recognizing homologous structures and gene expression patterns between groups and understanding the steps by which major morphological transformations were accomplished. Specific topics to be addressed by the meeting include the origin, patterning, and early evolution of jaws, appendages, and mineralized tissues, as well as the early diversification of vertebrates.

The meeting will be held at London's Natural History Museum, one of the foremost centers in the world for systematic and evolutionary research. All speakers are invited, but there will be an open poster session allowing nonspeaking delegates to present their work.

Provisional speaker list: P. E. Ahlberg, W. E. Bemis, J. A. Clack, M. I. Coates, P. Donoghue, P. L. Forey, H. E. Gee, J. Hanken, J. R. Hinchliffe, R. Hitchin, N. Holder, L. Z. Holland, P. W. H. Holland, P. Janvier, R. P. S. Jefferies, J. Joss, J. Mallatt, J. G. Maisey, B. D. Metscher, R. G. Northcutt, M. A. Purnell, I. J. Sansom, H.-P. Schultze, M. M. Smith, and M. P. Smith.

For further information, contact Dr. Per Ahlberg, Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom; e-mail p.ahlberg@nhm.ac.uk; fax 171 938 9277.

200 YEARS OF MAMMOTH RESEARCH

The Natuurmuseum Rotterdam (Natural History Museum Rotterdam) will organize and host the Second International Mammoth Conference (2nd IMC), to be held May 16-20, 1999. This 2nd IMC follows the First International Mammoth Symposium, which was held in 1995 in St. Petersburg, Russia. This first meeting started a tradition in mammoth conferences. It had a broad scope, with contributions about mammoths and the mammoth fauna. The Proceedings of this first meeting will be published in 1998 by the Natuurmuseum Rotterdam as a Special Volume of the journal *deinsea*.

The 2nd IMC will have a more limited scope. There will be three central themes: evolution and phylogeny, paleoecology and biogeography, and dwarfing and extinction.

Contributions are invited for orally presented papers and for posters within the broad limits of these central themes. The contributions will be published as a Special Proceedings Volumes of *deinsea* scheduled for 2000.

For further information and to receive further circulars, please contact: Organizing Committee 2nd IMC, Natuurmuseum Rotterdam, P. O. Box 23452, NL-3001 KL Rotterdam, The Netherlands; phone xx 31 10 436 42 22; fax xx 31 10 436 43 99; e-mail mammoth@nmr.nl.

EVOLUCION NEOTROPICAL DEL CENOZOICO, 19-23 May 1999, LA PAZ, BOLIVIA

Anyone with an interest in the Cenozoic of South America should plan to attend the international congress Evolucion Neotropical del Cenozoico, which will be held in La Paz, Bolivia, 19-23 May 1999. Already, a diverse group of specialists, including paleomammalogists, botanists, ecologists, primatologists, and vertebrate morphologists, are planning to present their works and develop future collaborative projects in South America. All presenters should plan to submit abstracts by 1 Feb. 1999.

Field excursions will take participants to nearby Andean localities. The pre-meeting excursion will go to Achiri (late Miocene) and the post-meeting excursion is to Salla (late Oligocene). Llama steaks (low in cholesterol) are on the menu.

For more information, or to be added to our mailing list, e-mail us at: pal@mnhn.rds.org.bo or write us snail-mail at: Evolution Congress/Departamento de Paleontologia/Museo Nacional de Historia Natural/ Calle 26 Cota Cota Casilla 8706/ La Paz, Bolivia.

The hosts in La Paz are Federico Anaya and Bruce J. Shockey.

MARY ANNING AND HER TIMES: THE DISCOVERY OF BRITISH PALAEOLOGY, 1820-1850

A bicentennial celebration in honor of the first woman paleontologist will be held at the Lyme Regis Philpot Museum June 2-4, 1999, Lyme Regis, England.

Mary Anning was born at the end of the 18th century and lived until the middle of the 19th. In those years, beginning as a young woman collecting fossils, she worked with the leading scientists of her day to assure England's place in the developing field of paleontology. Nearly 150 years after her death, her life is still largely shrouded in mystery and misrepresentation; her discoveries helped to form the foundations of paleontology, and she was quite possibly the first professional fossil collector, as well as being widely considered the first woman paleontologist. The true importance of her work and contributions is not yet adequately recognized.

This symposium aims to bring together specialists in paleontology, history, and sociology of science to create a picture of Mary Anning's life, work, and times. Drawing on new discoveries about her, situated in the historical and social context of early Victorian England, we will explore who Mary Anning was, what her contributions meant to the science of her times, and her role in society in an age of simultaneous liberation and constriction.

The convener of the symposium is Sir Crispin Tickell, Patron of the Museum, formerly Warden of Green College Oxford and British Permanent Representative at the United Nations, President of the Royal Geographical Society, and a great-great-great nephew of Mary Anning. The organizing committee includes paleontologists and historians of science Hugh Torrens, James P. Secord, Roy Porter, Michael Taylor, Christopher McGowan, and Kevin Padian, and Liz-Anne Bawden, Hon. Curator of the Lyme Regis Museum. John Fowles, Honorary Archivist and formerly Honorary Curator of the Lyme Regis Museum, is also participating. He is, of course, one of Britain's greatest living writers and a renowned conservationist; his novel "The French Lieutenant's Woman," which was largely concerned with evolution and paleontology, was set in Lyme Regis.

Keynote lectures in the symposium will be given by Stephen Jay Gould; Hugh Torrens, an expert on Mary Anning and former president of the British Society for the History of Science; Sir Crispin Tickell; and John Fowles. A reception hosted by John Fowles is planned for symposium participants. A geological walk in the environs of Lyme Regis's spectacular Mesozoic horizons is also planned.

You are invited to attend this symposium and profit from an unusual and invigorating mixture of experts on Mary Anning's life, times, and contributions. There are still some slots on the program for contributed talks. If you would like to contribute a brief talk, please contact Kevin Padian, who is coordinating the technical program (kpadian@socrates.berkeley.edu; phone 510-642-7434, fax 642-1822; or write him at the Museum of Paleontology, University of California, Berkeley CA 94720-4780, USA).

For those wishing to attend the symposium as participants or members of the audience, further information on costs and available housing in Lyme will be sent to those who answer the first circular. Please indicate your interest by mail, providing name, address, e-mail address, and telephone and fax numbers to the Lyme Regis Museum, Lyme Regis, Dorset, UK DT7 3QA; phone 01297-443370. If you are interested contributing to the symposium program, please contact Dr. Padian directly.

-- Publications

EVOLUTION OF SHREWS (Jan M. Wójcik and Mieczyslaw Wolsan, eds).

Mammal Research Institute, Polish Academy of Sciences, Białowieża 1998, 458 pp., hardback. ISBN 83-907521-0-7. Price US \$38.00 + postage.

In spite of an apparent recent increase of interest in shrews and an impressive bibliography on the evolution of this fascinating group of mammals, until now there has

been no comprehensive work that deals with current problems in shrew evolutionary research. This book represents an attempt to redress this omission, by offering a volume that seeks to review the present state of our knowledge of shrew evolutionary biology.

The contents of the volume are following: Introduction, by M. Wolsan and J. M. Wójcik; A classification of the fossil and Recent shrews, by J. W. F. Reumer; Fossil history of shrews in Europe, by B. Rzebik-Kowalska; Fossil history of shrews in Asia, by G. Storch, Zh. Qiu, and V. S. Zazhigin; Fossil history of shrews in Africa, by P. M. Butler; Fossil history of shrews in North America, by A. H. Harris; Dental adaptations in shrews, by E. Dannelid; Chromosomal evolution in shrews, by J. Zima, L. Lukáčová, and M. Macholán; Chromosomal evolution: The case of *Sorex araneus*, by J. B. Searle and J. M. Wójcik; Protein evolution in shrews, by M. Ruedi; Mitochondrial DNA evolution in shrews, by J. Hausser, L. Fumagalli, and P. Taberlet; Evolution of energetic strategies in shrews, by J. R. E. Taylor; Evolution of social systems in shrews, by L. Rychlik; Shrew mating systems, by P. Stockley and J. B. Searle; A list of the living species of shrews, by M. Wolsan and R. Hutterer; Taxonomic index.

The book is available from Mammal Research Institute, Polish Academy of Sciences, 17-230 Białowieża, Poland; telephone/fax +48-85-681-2289, e-mail evolbook@bison.zbs.bialowieza.pl. To order by Internet see <http://bison.zbs.bialowieza.pl/evol/evol.htm>.

-- Positions Available

CURATOR OF PALEONTOLOGY, HOUSTON MUSEUM OF NATURAL SCIENCE

The Houston Museum of Natural Science seeks an energetic and creative paleontologist with a minimum of three years experience with museum collections, exhibits, and public programs. The successful applicant will be an organized team player, with excellent people skills and an enthusiastic willingness to regularly interact with school groups, museum members, and the general public. Responsibilities will include temporary and permanent exhibit development, curation, and the development of public education programs for students of all ages. Applicants must be self-motivated and capable of creating opportunities to pursue collection-based research, as well as spearhead self-directed fieldwork, particularly in the state of Texas. Doctorate preferred but will consider all qualified candidates. Please send a letter of application, CV, and samples of professional and popular writings. All inquiries should be sent to: L. Rebori, Houston Museum of Natural Science, #1 Hermann Circle Drive, Houston TX 77030-1799. The review of applications will begin on July 1, 1998. The HMNS is an equal opportunity employer.

GRADUATE FELLOWSHIP ANNOUNCEMENT

The University of Florida is pleased to announce the Lucy Dickinson Graduate Fellowship in Vertebrate Paleontology. Candidates should apply to the graduate program

of an appropriate academic department (e.g., zoology, geology, anthropology, or wildlife) at UF and mail a copy of the application cover, along with a letter of intent, to the Lucy Dickinson Fellowship, Florida Museum of Natural History, 222 Dickinson Hall, University of Florida, Gainesville FL 32611-7800. The stipend will be \$16,000 for the year August 1999 to August 2000. Duties include satisfactory progress in the chosen graduate program and curation experience in the Florida Museum. A Lucy Dickinson Fellowship can be repeated in the final year of graduate studies. For more information about vertebrate paleontology at the Florida Museum of Natural History, consult <http://www.flmnh.ufl.edu/natsci/vertpaleo/vertpaleo.htm>.

VERTEBRATE PALEONTOLOGIST, Utah Museum of Natural History and Department of Geology and Geophysics at the University of Utah

Position Vacancy: The Utah Museum of Natural History (umnh) and Department of Geology and Geophysics (GG) at the University of Utah invite applications for a joint position as Curator of Vertebrate Paleontology and Assistant, Associate, or Full Professor of Geology and Geophysics beginning as early as December 1998. The majority of this split appointment is vested in the Museum, the remainder in the Department. Duties include maintaining a strong field- and collections-based research program involving students and overseeing the curation and continued development of the Museum's vertebrate fossil collections. The collections include over 15,000 specimens, with emphasis on Mesozoic groups from Utah and surrounding regions. In addition, the successful applicant will teach one formal course per year in the Department of Geology and Geophysics, participate in Museum public programs and exhibit development, and participate in Department governance. The position is an 11-month appointment at a competitive salary level.

Qualifications: Candidates must have a Ph.D. with strong records of research and publication in vertebrate paleontology. A strong interest in museum curation and public programming is essential. Research and/or curatorial experience with vertebrate fossils from western North America is preferred. Applicants interested in further information about this position may contact Dr. A. A. Ekdale (Department of Geology and Geophysics) at 801-581-7266 or 801-581-7062 (e-mail: ekdale@mines.utah.edu), or Dr. Duncan Metcalfe (Utah Museum of Natural History) at 801-585-9055 or 801-581-6927 (e-mail: metcalfe@anthro.utah.edu).

To apply: Review of applications will begin immediately and continue until the position is filled. Applicants should submit a letter of interest, curriculum vitae, and names of three references to: Paleontology Search Committee Chair, Department of Geology and Geophysics, University of Utah, 135 South 1460 East, Rm 717, Salt Lake City, UT 84112-0111. The University of Utah is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities and provides reasonable accommodation to the known disabilities of applicants and employees.

DINAMATION INTERNATIONAL SOCIETY PALEONTOLOGY SCHOLARSHIPS

Alfred and Rose Miniaci Scholarships

Two awards of \$1,500.00 each to students seeking a career in paleontology. One to a qualified graduate student; one to a qualified undergraduate. Demonstration of active community involvement and service (such as outreach programs as a volunteer, assisting school children, etc.) is important.

Ying Chang Scholarships

Two awards of \$1,000.00 each to qualified graduate students seeking an advanced degree specializing in paleontology.

John and Mary Gosule Student Award

One award of \$1,500.00 to a qualified undergraduate student seeking to specialize in paleontology. Applicant must demonstrate a strong aptitude for science and paleontology and a strong financial need.

To Apply for These Five Scholarships

Interested candidates for these scholarships must submit a cover letter, résumé, and three letters of recommendation, one of which is from a major advisor. Verification of acceptance into graduate school or active attendance in an accredited university or college is required. Must be a person of good character and integrity, and have demonstrated a potential for success. Each application is considered for all the scholarships for which the applicant qualifies.

Application deadline is April 15, 1999. Scholarships are available for the 1999-2000 school year. Send application materials to: Dr. George Callison, Scholarship Awards Committee, Dinamation International Society, 550 Jurassic Court, Fruita CO 81521, USA.

DINAMATION INTERNATIONAL SOCIETY'S SUMMER INTERNSHIP PROGRAM

The Dinamation International Society has openings for summer interns to work with our participant-funded dinosaur research program. Work will involve assisting in the supervision of participants in the excavation of an Upper Jurassic Mygatt-Moore Quarry in western Colorado and assisting the Bureau of Land Management in providing interpretation and security for the site. A minimum of a two-month commitment is required. The applicant should be "people oriented" with a deep interest in dinosaur paleontology and be able to provide own transportation.

Benefits include housing in a trailer on site (17 miles from our Dinosaur Discovery Center) and a stipend of \$500 for living expenses. Interns will receive training in all aspects of field paleontology and will have many opportunities for training in preparation

techniques as well. Additionally, there will be many opportunities to visit and assist at other dinosaur sites in the region. It is hoped the interns will use this position for independent study credit.

Send two letters of recommendation and résumé to: Michael Perry, Director, Dinamation International Society, 550 Jurassic Court, Fruita CO 81521.

-- **Obituaries**

COLIN PATTERSON, PH.D., F.R.S., 1933-1997

It is a sad irony that I write this obituary for Colin Patterson just six months after handing him the Romer-Simpson Medal (see February 1998 issue of *SVP News Bulletin*, pp. 29-31). Last October he became only the tenth recipient of the prestigious medal, SVP's highest award for excellence and service to the discipline of vertebrate paleontology. On March 9, 1998, Colin died of a heart attack while bicycling to work on the streets of London. Born in that city on October 13, 1933, Colin Patterson leaves behind his wife, Rachel, and their two daughters.

His education began at Tonbridge School, and he graduated from Imperial College in 1957 with First Class Honors in parasitology. During an undergraduate internship at the British Museum (Natural History) in London, he met Earol White, who introduced him to paleoichthyology. Fossil fishes held an attraction for him in part because (as he liked to say) they didn't smell as bad as the guts he would have to dig through for his studies in parasitology. His change in specialization was spurred mostly by an early interest in evolution and vertebrate paleontology.

From 1957 to 1962 Colin was a lecturer in biology at Guy's Hospital Medical School, London. During this period he began a detailed study of fossil teleosts from the Cretaceous English Chalk together with closely related living species and demonstrated that perciforms (as they were then classified) were nonmonophyletic. This study became his Ph.D. thesis and was published by the Royal Society in 1964.

He started at the British Museum (Natural History) in 1962 as scientific officer in charge of the world's largest fossil fish collection and went on to set many new standards in paleontology, systematics, evolutionary studies, and particularly in his work on fossil fishes. Colin was one of the first to recognize the potential of acid-preparation, which he used on material for his Ph.D. dissertation. With fine acid preparation, fossil fish skeletons could now be more easily compared to Recent fish skeletons, and the integration of fossil and living species in comparative studies became another of his strengths. He quickly appreciated that the most effective way to study the morphology and phylogeny of fossil teleosts (and other groups) was to study the fossil material together with Recent material. He and his close colleague, the late Donn Rosen from the American Museum, set new standards in ichthyology for such multidisciplinary studies with several groundbreaking papers (e.g., Rosen and Patterson, 1969; Patterson and Rosen, 1977; Patterson, 1977).

Where many paleontologists focussed primarily on stratigraphy to interpret phylogeny, Colin focussed on the details of comparative anatomy, which naturally led him to become involved in the early infusion of cladistic methodology to vertebrate paleontology. His comparative anatomical work was widely acclaimed. As one reviewer of a Patterson monograph put it, "...it is fair to conclude that in a hundred years' time Patterson's work will stand much as it does now, a milestone in comparative paleontology.

In addition to writing highly influential work on ichthyology, comparative anatomy, and evolutionary theory, Colin produced important papers on bone development and histology, biogeography, homology, and more recently molecular phylogenetics. His contributions, too many to mention here, include over 150 papers, books, and reviews (most of which are listed in Schaeffer and Gardiner, 1996).

Colin also provided extraordinary service to various scientific fields as a manuscript reviewer. He spent seven years as editorial secretary and zoological editor of the Linnean Society, but his editing efforts went well beyond that. Whenever I visited him in London, his office was heaped with great piles of manuscripts and grant proposals that he would tear through at an amazing rate. I once asked him why he agreed to review so many manuscripts, and he told me that it was the most effective way he could keep current with the literature.

In March 1993 Colin was elected to the Royal Society of London in recognition of the outstanding originality of his research in paleontology and to systematic theory. He was elected as a foreign honorary member of SVP, of The Society of Ichthyologists and Herpetologists, and of the Willi Hennig Society. In early 1997 he was appointed to the board of trustees at the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C., an interesting position for a London resident. His final honor in life was receiving the aforementioned Romer-Simpson Medal at the 57th Annual Meeting of the Society of Vertebrate Paleontology, in Chicago in October 1997. Posthumously, this summer, Colin Patterson was awarded the gold medal of the Linnean Society, the highest award of that society.

Colin had a sharp wit, and his publications on evolution, systematics, and the history of paleontology were always entertaining and educational (e.g., for a review of bony fishes written in his typically entertaining yet informative style, see Patterson, 1994). He faced controversy head on, with a keen sense of logic and without ambiguity. He made paleontology better by making it more self-critical.

Colin's published work on fishes was key to sparking my own initial interest in systematic ichthyology and was ultimately a big reason why I chose this field. He also taught me how to drink a couple of pints of English beer for lunch and then put in a good day's work afterwards.

I will miss him greatly, as will many. (Lance Grande)

References

Patterson, C. 1964. A review of Mesozoic acanthopterygian fishes with special reference to those of the English Chalk. *Philosophical Transactions of the Royal Society of London*, ser. B, 247:213-482.

Patterson, C. 1977. The contribution of paleontology to teleostean phylogeny. Pp. 1-7, *in* M. K. Hecht, P. C. Goody, and B. M. Hecht (eds.), *Major Patterns in Vertebrate Evolution*. Plenum Press, New York.

Patterson, C. 1994. Bony fishes. Pp. 57-84, *in* D. R. Prothero and R. M. Schoch (eds.), *Short Courses in Paleontology*, no. 7. Paleontological Society, University of Tennessee, Knoxville. R. S. Spenser, Series Editor.

Patterson, C., and D. E. Rosen. 1977. Review of ichthyodectiform and other Mesozoic teleost fishes and the theory and practice of classifying fossils. *Bulletin of the American Museum of Natural History*, 158:81-172.

Rosen, D. E., and C. Patterson. 1969. The structure and relationships of the paracanthopterygian fishes. *Bulletin of the American Museum of Natural History*, 141:357-474.

Schaeffer, B., and B. G. Gardiner. 1996. An annotated bibliography of the work of Colin Patterson. Pp. 1-7, *in* M. L. J. Stiassny, L. Parenti, and G. D. Johnson (eds.), *Interrelationships of Fishes*. Academic Press, San Diego.

LORIS S. RUSSELL, 1904-1998

On July 6, 1998, Loris Shano Russell passed away in Toronto at the age of 94. His passing brings to a close a major period in the history of Canadian vertebrate paleontology.

Loris Russell was born in Brooklyn in 1904, but his parents moved to Calgary in 1908. After graduating from the University of Alberta in 1927, he undertook his graduate studies under the supervision of William Berryman Scott at Princeton where he received his Ph.D. in 1930. For the next seven years, Russell worked for the Geological Survey of Canada. In 1937, he joined the staff of the Royal Ontario Museum of Palaeontology, one of the five precursors of the present-day Royal Ontario Museum. Interrupted by war-time service in the Royal Canadian Corps of Signals from 1942 to 1945, he worked at the institution until 1950, rising to the rank of Director. In 1950, Russell moved to Ottawa to assume the post of Chief of the Zoology Section at the National Museum of Canada, and was appointed Director of the Museum in 1957. Favorable opportunities led him back to Toronto in 1963 where he became Chief Biologist in charge of the life sciences departments (including paleontology) at the Royal Ontario Museum and Professor of Geology at the University of Toronto. In the latter capacity, he had the opportunity to supervise graduate students, including John E. Storer, Mark V. H. Wilson, and Paul

Ramaekers. He held these posts until his retirement in 1971. Retirement did not slow down his research in the field and laboratory, as a steady stream of publications attested. His last paper was published in 1993, some 60 years after his first publication.

Starting as a graduate student, Loris Russell made many fundamental contributions to the paleontology and stratigraphy of the Late Cretaceous and Early Tertiary strata of western Canada, especially southern Alberta and Saskatchewan. He was the consummate field geologist and continued to do fieldwork until he was well into his 80s. While best remembered for this research, his remarkable range of interests led him to many other projects in vertebrate paleontology. For example, Russell visited the famous exposures of the Devonian fish-bearing strata of the Escuminac Formation at Miguasha, Québec in 1938. Building on earlier geological studies, as well as his own meticulous observations in the field, he distinguished six fossil zones, which became informally known as "Russell's fish zones."

During his long career Russell worked on almost every major group of animals, especially vertebrates and nonmarine molluscs. Most notable are his studies on mammals from the Late Cretaceous and Early Tertiary continental strata of western Canada. They indicated the tremendous potential of these rocks for the recovery of mammals and other small vertebrates, which subsequently was fully realized by Richard C. Fox and his students at the University of Alberta. Russell also made several important contributions to the study of Cretaceous dinosaurs from Alberta and published one paper on dinosaurs that, in retrospect, was revolutionary. In 1965 -- well before the beginning of the "Dinosaur Revolution" he published a paper in the *Journal of Paleontology* in which he argued that dinosaurs were "warm-blooded."

Russell was also an avid student of the history of vertebrate paleontology. His delightful booklet "Dinosaur Hunting in Western Canada" (Contribution no. 70, Life Sciences Division, Royal Ontario Museum, 1966) is a treasure trove of dinosaur-hunting lore, much of it recorded first-hand by him.

Numerous honors and awards recognized Loris Russell's distinguished career and achievements. Elected a Fellow of the Royal Society of Canada in 1936, he received the society's Willet G. Miller Medal in 1959. In 1984, Russell was awarded the Billings Medal of the Geological Association of Canada, and, in 1992, he received the Romer-Simpson Medal of the Society of Vertebrate Paleontology.

Although a private, rather formal man, Loris Russell had an unfailingly gracious manner. He was a connoisseur of historical Canadian lighting and other objects of material culture, and published several important books on these subjects. His wife of 60 years and faithful companion in the field, Grace, recently predeceased him. (Hans-Dieter Sues)

ROBERT SAVAGE, 1927-1998

Robert Savage, Professor of Vertebrate Palaeontology at the University of Bristol, died of cancer of the pancreas on May 9 at age 70. He was born on July 2, 1927.

Bob Savage was a leading expert on fossil mammals, best known for his work in Africa, and something of a raffish gentleman explorer. He began his work in Africa in 1955, working first with Louis Leakey, and latterly with his son, Richard, and daughter-in-law, Meave Leakey. The Leakeys focussed their attention on the early human remains, but they gathered around them experts on other fossils from their sites. Bob took part in many expeditions in Kenya and Tanzania, and published extensively on the fossil carnivorous mammals of the hominid sites.

Bob was bitten by the Africa bug after this early initiation, and he published accounts of fossil mammals from Uganda, Congo, and especially from Libya. He and his students in the 1960s would drive to Libya from Bristol in Bob's Landrover. The journey took three days and nights of continuous driving, through France and Spain, across to Morocco from Gibraltar, and then to Libya via Algeria and Tunisia. Bob and his colleagues focussed their attention on the Gebel Zeltan fauna of southern Libya, an assemblage of mammals dating from the Miocene, a time 20 million years ago, when North Africa was lushly forested. Bob wrote several monographs on the fauna, part of a series published by the British Museum (Natural History), and his account of *Megistotherium*, a giant flesh-eating hyaenodont with a skull over a meter long, is a classic.

Bob Savage's work on African mammals found another focus in an influential series of volumes, which he co-edited with Louis Leakey, and other collaborators, on the "Fossil Vertebrates of Africa," in the 1960s and 1970s. His expeditions were not restricted to Africa, and he led successful explorations to Iran (then Persia), Israel, India, Pakistan, Russia, and Australia. In 1991, on his retirement, he drove from Pakistan to Beijing, across the Himalayas, as a diversion.

Bob was born in Northern Ireland in 1927, a member of an old Ulster family that held sway in the southern part of the Ards Peninsula, County Down. He recalled a massive set of antlers of the great Irish deer *Megaloceros* mounted on a wall of the entrance hall to the family pile. Bob was educated at Methodist College, Belfast, and at Wesley College, Dublin, but he did not maintain a methodist or protestant faith, becoming a humanist in his adult years. Bob graduated with double undergraduate degrees, a BSc in zoology in 1948, and a first-class BSc in geology in 1949, from the Queen's University of Belfast. He worked for his Ph.D. from 1950 to 1952 at University College, London, under Professor D. M. S. Watson, the doyen of British vertebrate paleontology at the time.

Bob's first academic position was as Assistant Lecturer in the Geology Department at the Queen's University of Belfast in 1952. There he worked with the great expert on the Irish Pleistocene, Professor Charlesworth, and was involved in the move of that department into a new purpose-built edifice. Bob soon moved to Bristol in 1954 as a Lecturer and Curator of the collections in the Department of Geology. He was promoted to a Readership in 1966 and to a Personal Chair in Vertebrate Palaeontology in 1982.

Bob maintained a broad interest in local geology, first in Ireland and then in the southwest of England. He was a constant source of help to amateurs and enthusiasts, organizing field trips, and helping them to publish their discoveries. He became deeply

interested in the very early Mesozoic mammals of the Bristol area and slightly further afield on Skye. These local geological interests extended to the history of his science: he was an avid collector of early geological and natural history books, and published on the history of geology.

Bob made enthusiastic efforts in educating new generations of paleontologists. In 1968 he began a Joint Degree in Geology and Zoology in Bristol, and this program flourishes to the present day. It is widely recognized as a training ground for keen young paleontologists, and a remarkable number of its graduates have gone on to successful academic careers. This always made Bob inordinately proud, and he kept continuous contact with his former students. He supervised 17 Ph.D. students, mainly marking on fossil mammals, British and African. Among his popular works, Bob edited an excellent field guide to the geology of the Bristol area, published in 1977, and contributed to numerous popular works in paleontology and geology. His greatest joy was his book "Mammal Evolution," published by the British Museum (Natural History) in 1986, richly illustrated with color paintings by Michael Long. This book is referred to as "Savage and Long," an addition to a paper published by Bob and local colleague, Nick Large, in 1966, namely "Savage and Large."

Latterly, Bob extended his interests to historic gardens, and he studied formal gardens of stately homes large and small in the Bristol area. He served on local committees of the National Trust, and was Chairman of their Committee on Stag Hunting in 1992 and 1993.

Bob was endlessly helpful to scholars young and old, and boyishly enthusiastic about matters geological and historical. He had a patrician air, and was full of stories of the great and the good. He was an amusing raconteur, whose tales, admittedly, improved with the telling.

He sat on the Council of Bristol Zoo from 1984 to 1989, and this apparently gave him access to recently deceased exotica. Some of the carcasses found their way to his dissecting bench, others into his kitchen. He once sampled some hippopotamus steak, and on being asked what it tasted like reported, "well, something like okapi."

Bob married Dr. Shirley Coryndon in 1969, but she died in 1976. He is survived by his step-daughters Anna and Virginia. (Michael J. Benton)

BOB H. SLAUGHTER, 1928-1998

Bob H. Slaughter, retired Professor of Geology at Southern Methodist University, died peacefully in his Dallas home on March 24, 1998, after a long struggle with cancer, a few weeks shy of his 70th birthday. Billie Mae Slaughter, Bob's first wife and mother of his two children, preceded him in death. He is survived by his second wife, Juliana Bernier; his third wife and widow, Judith Burkart-Slaughter, who lives in Dallas in the house Bob built for his parents; and by his two children, Diana and Bob, and several grandchildren.

Bob was the first Director of the Shuler Museum of Paleontology at SMU in the 1960s, with the guidance and counsel of his long-time mentor, Professor Claude Albritton, and remained its director until his retirement in 1984. Albritton and Slaughter held common interests in geology, archaeology, and Pleistocene paleontology, which Slaughter had pursued as an avocationist at night and on weekends, supported by his first career as a builder and architect.

As a dedicated field paleontologist, Bob collected fossils first around Dallas, then in surrounding counties in northern Texas, soon as far away as Clovis, New Mexico, and eventually to Mexico, Guatemala, Panama, Egypt, Mallorca, and throughout Europe. As his avocation, paleontology, became his vocation, his natural talents as a teacher began to develop. With the founding of the Shuler Museum, Bob's passion for science, students, and learning had surfaced and he was on the road to a new career. Bob drew adventurous graduate students from around the country to the Geology Department and Institute for the Study of Earth and Man at SMU. The Department needed courses and research programs in paleontology, and Bob rose to the challenge. In 1970 he was appointed Assistant Professor of Geology, a remarkable achievement by itself for a paleontologist without formal training. Bob once confessed to me that he was terrified on walking into class the first several times he offered formal courses, and had borrowed notes from a paleontologist whose name I swore never to divulge, but who lived in Idaho for a long time and built a career on fossil rabbits.

Bob was promoted again, to Associate Professor with tenure, and expanded his research interests to all things Pleistocene, Tertiary mammals and herps, and Cretaceous faunas, especially Lower Cretaceous mammals. He argued for climatic causes of Pleistocene extinction and presented his case to audiences around the world. Bob had at least 20 graduate students in his career, and was a direct influence on dozens more. Bob was picked by *People* magazine in 1977 as one of 12 professors "whom their students and peers salute for excellence" and he received the Distinguished Contributions to Earth Sciences Award from the American Association of Mineralogical Societies. He was President of the Texas Academy of Science in 1970, a tribute to the respect he had gained from his peers. He published more than a hundred papers on paleontology, and wrote scores of popular articles for magazines and newspapers.

In the early 1980s Bob retired from SMU to pursue his third career, as artist and sculptor, but he could not forsake his life as a paleontologist. Many of his creations were mythical creatures-in-the-rocks, as though in the process of being excavated. Bob's first artistic endeavor, Dead Pan, won first place in the Texas Sculpture Association competition. He wrote a set of enchanting stories on excavating fairies, mermaids, Pan, Kokopelli, leprechauns, and a myriad of other magical creatures, and published them under the title, "Fossil Remains of Mythical Creatures." With his widow, Judith Burkart-Slaughter as an advisor, a Hollywood movie producer is working on a feature length film based on those stories.

Bob's remarkable enthusiasm and zest for life touched everyone who knew him. He pushed his own limits and expected everyone around him to do the same. His legacies are

his students and colleagues, and the lasting creativity that he poured into every pursuit, from excavating a plesiosaur skeleton in the runway under construction outside the Braniff Airlines terminal at the Dallas-Fort Worth Airport, to carving the intricate details into the butterfly wings of a miniature fairy.

Many of Bob's students gathered in Dallas in February to hold a party in his honor. Though weak, he rallied to tell stories that we had long forgotten and repeated some favorite memories of his career in paleontology. We all had some hearty laughs. Bob passed away a few weeks later, surely with one last laugh and another hearty story to tell. (David D. Gillette)

The Society of Vertebrate Paleontology

By-Law on Ethics

Article 9. Statement of Ethics.

Several goals for the Society of Vertebrate Paleontology follow from its mission statement (Constitution Article 1): to discover, conserve, and protect vertebrate fossils and to foster the scientific, educational, and personal appreciation and understanding of them by amateur, student and professional paleontologists, as well as the general public. Fossil vertebrates are usually unique or rare, nonrenewable scientific and educational resources that, along with their accompanying contextual data, constitute part of our natural heritage. They provide data by which the history of vertebrate life on earth may be reconstructed and are one of the primary means of studying evolutionary patterns and processes as well as environmental change.

It is the responsibility of vertebrate paleontologists to strive to ensure that vertebrate fossils are collected in a professional manner, which includes the detailed recording of pertinent contextual data (e.g., geographic, stratigraphic, sedimentologic, taphonomic). It is the responsibility of vertebrate paleontologists to assist government agencies in the development of management policies and regulations pertinent to the collection of vertebrate fossils, and to comply with those policies and regulations during and after collection. Necessary permits on all lands administered by federal, state, and local governments, whether domestic or foreign, must be obtained from the appropriate agency(ies) before fossil vertebrates are collected. Collecting fossils on private lands must only be done with the landowner's consent. Fossil vertebrate specimens should be prepared by, or under the supervision of, trained personnel. Scientifically significant fossil vertebrate specimens, along with ancillary data, should be curated and accessioned in the collections of repositories charged in perpetuity with conserving fossil vertebrates for scientific study and education (e.g. accredited museums, universities, colleges, and other educational institutions). Information about vertebrate fossils and their accompanying data should be disseminated expeditiously to both scientific community and interested general public. The

barter, sale, or purchase of scientifically significant vertebrate fossils is not condoned unless it brings them into, or keeps them within, a public trust. Any other trade or commerce in scientifically significant vertebrate fossils is inconsistent with the foregoing, in that it deprives both the public and professionals of important specimens, which are part of our natural heritage.

SVP Sponsors

As of May 20, 1998

The following individuals sponsor one or more SVP members by generously paying for their annual dues. If you are interested in becoming an SVP sponsor, please complete the enclosed sponsorship application.

William Bartels, Kenneth Carpenter, Robert L. Carroll, Judd A. Case, Mary R. Dawson, Eric Delson, Peter Dodson, Robert J. Emry, Richard C. Fox, Joseph H. Hartman, David W. Krause, Donald L. Lofgren, Spencer G. Lucas, Ernest L. Lundelius, Bruce J. MacFadden, Jonathan D. Marcot, Jim I. Mead, Adele Panofsky, Patricia Rich, Bruce M. Rothschild, Jeffery Saunders, Judith A. Schiebout, Holmes A. Semken, George V. Shkurkin, Gary Takeuchi, Loren M. Toohey, Mahito Watabe, S. David Webb, David Weishampel

The Society of Vertebrate Paleontology By-Law on Ethics

Article 9. Statement of Ethics.

Several goals for the Society of Vertebrate Paleontology follow from its mission statement (Constitution Article 1): to discover, conserve, and protect vertebrate fossils and to foster the scientific, educational, and personal appreciation and understanding of them by amateur, student and professional paleontologists, as well as the general public. Fossil vertebrates are usually unique or rare, nonrenewable scientific and educational resources that, along with their accompanying contextual data, constitute part of our natural heritage. They provide data by which the history of vertebrate life on earth may be reconstructed and are one of the primary means of studying evolutionary patterns and processes as well as environmental change.

. It is the responsibility of vertebrate paleontologists to strive to ensure that vertebrate fossils are collected in a professional manner, which includes the detailed recording of pertinent contextual data (e.g. geographic, stratigraphic, sedimentologic, taphonomic).

. It is the responsibility of vertebrate paleontologists to assist government agencies in the development of management policies and regulations pertinent to the collection of vertebrate fossils, and to comply with those policies and regulations during and after collection. Necessary permits on all lands administered by

federal, state, and local governments, whether domestic or foreign, must be obtained from the appropriate agency(ies) before fossil vertebrates are collected. Collecting fossils on private lands must only be done with the landowner's consent.

. Fossil vertebrate specimens should be prepared by, or under the supervision of, trained personnel.

. Scientifically significant fossil vertebrate specimens, along with ancillary data, should be curated and accessioned in the collections of repositories charged in perpetuity with conserving fossil vertebrates for scientific study and education (e.g. accredited museums, universities, colleges, and other educational institutions).

. Information about vertebrate fossils and their accompanying data should be disseminated expeditiously to both scientific community and interested general public.

. The barter, sale, or purchase of scientifically significant vertebrate fossils is not condoned unless it brings them into, or keeps them within, a public trust. Any other trade or commerce in scientifically significant vertebrate fossils is inconsistent with the foregoing, in that it deprives both the public and professionals of important specimens, which are part of our natural heritage. □