

SOCIETY OF
VERTEBRATE
PALEONTOLOGY
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OFFICIAL BUSINESS

Report of the Secretary-Treasurer for the Fiscal Year October 1, 1992 to September 30, 1993

On September 30, 1993, the Society recorded 1,024 Regular, 342 Student, 288 Associate, 29 Honorary, and 4 Senior members, totaling 1,687, an increase of 112 members this year a gain of 7.1%.

Income

The Society received its principal income from dues, sale of publications, endowment contributions, award funds, and proceeds from the Annual Meeting (see Financial Report, Income). Total income for this fiscal year was \$209,563.60, a decrease of about \$35,753 relative to last year. Dues income was about \$86K, an increase of approximately \$4K over last year. Endowment income of \$27,151 held at nearly the same level (\$28,907 in 1991 92) but remains much reduced relative to 1990 91 (\$63K) and earlier years.

Income from Society publications declined from \$83.5K in 1991 92 to \$69.1K this year. This significant decrease stems from a decline in contributions to page charges by *JVP* authors in the amount of \$6,000 over the previous year; decline in receipts for AGI volumes of the *BFV* ; and no additional income to the database management fund (a projected NSF grant will attempt to supply new funds, see *SVP News Bulletin*, February 1993, p. 8). Sale of *BFV* volumes continues to hold at about \$32 33K this year and in

1991 92. The cost of producing the *JVP* abstract volume (\$4,200) for the Annual Meeting is now largely paid for by abstract fees (\$4,120), remedying the situation in 1991 92 when abstract fees paid only half of the cost of the volume.

The award funds of the Society made significant gains: the Estes and Skinner funds were moved to the Dean-Witter Utilities Fund which proved to be highly successful this year in securing an interest return of over 20% (see Endowment Report). A major donation to the Estes Fund placed this account at the top of the Society's award funds in total value of principal.

Annual auction receipts from the Toronto meeting totaled \$7,313, exceeding 1991 92 auction receipts by nearly \$1K; the Annual Meeting surcharge also realized about \$4,300 for the Society.

Monies received for mailing labels, postage, and bank interest from the Society's operating account provide the bulk of miscellaneous income, about \$5K.

Our projections at the beginning of this fiscal year generally held for most income categories. The Society received about \$4,200 more in dues and contributions than expected; about \$9,200 more in publication income; about \$8,100 more in award income; and about \$5,600 more from the Annual Meeting, yielding a new gain of \$27,163 over 1992 93 projected income.

Expenses

Expenses during the fiscal year totaled \$209,612.02 (see Financial Report, Expenses). As in previous years, the principal costs are the production of the Society's publications (particularly the Bibliography), the maintenance of the Business Office, and accounting and legal fees necessary to manage a professional society with current income and endowment now in excess of one million dollars.

The *News Bulletin* incurred costs beyond budget this year because of the production of the Address Directory; costs should return to projected expenses of about \$10 11K in the coming year. We thank Mary Ann Schmidt and Dave Berman for their efforts in producing the directory and the bulletin this past year during the transition from Berkeley to Pittsburgh.

The *Journal of Vertebrate Paleontology* also experienced a cost overrun due to production of numbers with additional pages. Editors Rich Cifelli and Hans-Dieter Sues note that the demand to publish additional and/or more lengthy articles will continue to stress the *Journal*'s budget. Together, *JVP* and *News Bulletin* expenses exceeded their projected amounts by \$7,340 this year: the Society must address the issue of increasing publication costs for the *News Bulletin*, *JVP*, and *Bibliography* in the immediate future.

Declining endowment income further magnifies the impact of increasing publication costs, creating a deficit not easily resolved by current income projections.

The *Bibliography of Fossil Vertebrates* will be produced this year as both a printed volume and in database format on computer disk. Approximately 52 disks have been sold since the Toronto meeting for review by Society members, \$20 per disk going to I-Mode Corporation who have contracted with the Society for production of the disks. Under the able guidance of George Shkurkin, Judy Baeskaï, and Bonnie Rauscher, final copy for the 1990 volume has been sent to press and the volume will be mailed in early 1994 to members and institutions, thanks to the generosity of Dr. Herbert Axelrod who continues to print these volumes at no cost to the Society. Cost of *BFV* production in 1993 94 was \$71,630 whereas income generated by sales of the *Bibliography* reached \$32,000, a deficit of over \$39K. Although the 1990 Executive Committee voting in Lawrence, Kansas, established a \$65K budget ceiling for the *BFV*, legitimate cost increases and the urgent need to adequately compensate the bibliographers will continue to supply a strong rationale for budget increases to \$70 75K and consequently will require creative solutions to increase *BFV* revenues.

General office expenses were reduced this year to \$41,171 from \$45,759 from the previous year for a savings of \$4,587. Principal expenses are the salary of the Business Manager, office supplies, postage/shipping, legal and accounting costs. The first full audit of the Society's books was completed during this fiscal year by the Lincoln firm of Dale Gruntorad & Co. at a cost of \$1,800: by vote of the Executive Committee a formal audit of the Society's financial and physical assets including the endowment funds will be carried out annually by certified public accountants.

Net Income, Operating Accounts

For fiscal year 1992 93, income of \$209,563.60 minus expenses of \$209,612.02 produces a net income of -\$48.42. Note that in the previous two years our net income has averaged \$27,630 (*SVP News Bulletin*, February 1993, p. 9). The Society is experiencing a significant decline in net income.

The Society continues to operate at a deficit (see Operating Account, Statement Balances). This year the deficit is -\$31,539, generally about what it has been in past years. The Society can operate with the deficit since cash flow from membership renewals in July, August, and September is sufficient to pay bills in the final quarter of the fiscal year. However, this means we are spending unearned income, and while this has been possible in the past, income is declining in recent years to the point where cash flow no longer is adequate to handle the end-of-the-year bills. As a result, it is necessary to remove endowment interest to pay these bills. To avoid erosion of the endowment, income must be increased to the extent that current bills can either be met by cash flow from renewed and new memberships, or sufficient new assets are acquired to pay the

deficit. This is the fundamental financial problem facing the Society in the view of the current Treasurer and his immediate predecessors.

Internal Fund Transfers

During the fiscal year 1992 93, several fund transfers moved monies from the endowment to the operating account and from operating into new endowment vehicles. On recommendation of the firm of Dean-Witter-Reynolds and with the approval of the Executive and Investment Advisory committees, \$100K was removed from the U.S. Government Securities Trust in order to further diversify assets within the endowment and placed in \$20K increments in a laddered series of certificates of deposit, maturing from 1 to 5 years (FirstTier Bank and National Bank of Commerce, Lincoln). In addition, assets of the Estes Fund were transferred from operating to the Dean-Witter Utilities Fund to maximize the earned interest on the account. Finally, a Treasury Note valued at \$10K and \$12,404.18 in Liquid Assets which were earning minimal interest were placed in operating to pay expenses incurred in the latter half of the fiscal year (these funds represent removal of endowment fund interest to pay operating expenses of the Society, a practice that will occur more frequently if Society revenues continue to decline in future years).

Endowment

As of 30 September 1993, the endowment of the Society was \$880,978.55 (see Endowment report). On 30 September 1989, the value of the endowment stood at \$501,396.48. During the intervening four years, the value of the endowment has increased by \$379,582.07.

Currently \$683K are invested in various Dean-Witter funds, \$45K in treasury notes, and about \$153K in certificates of deposit (4.25 5.25%, terms of ten months to five years) in Lincoln banks.

Performance of the various Dean-Witter funds was again very good in a strong market for 1992 93. Here are the 12-month fiscal year returns on our principal Dean-Witter funds: U.S. Government Securities Trust (8.34%), Dividend Growth Fund (15.6%), Utilities Fund (21.26%), Prime Income Trust (4.45%), treasury notes (8.15%). Two of our award funds have been invested in the Dean-Witter Utilities Fund and they achieved the following 12-month yields: Morris Skinner Fund (21.26%), Richard Estes Fund (21.26%).

Our average interest return on all endowment funds for 1992 93 was 11.44%.

Further growth in the endowment will be possible through the generous contributions of concerned members. A one-million-dollar endowment is within reach and will facilitate educational programs, scholarships, and publications of the Society. We thank all Society members for their generosity in this fiscal year and encourage you to make a gift within your means this coming year to help attain the one-million figure, a milestone in the history of the Society. (Robert Hunt, Jr., Treasurer)

Nominating Committee

Representing SVP's Nominating Committee (membership composed of three Past Presidents of the Society; other members are Rufus Churcher and Jim Hopson), I am happy to recommend the individuals listed below for inclusion on the upcoming general ballot. As charged by William A. Clemens (President of SVP), the Nominating Committee was to select two willing candidates for *each* of the following two offices: Vice President of the Society (to be filled following ascendancy of David Krause to the Presidency after the Seattle meeting), Member-at-Large (one of three, to replace Brent Breithaupt as his normal term expires).

The following individuals (listed alphabetically) have agreed to have their names placed on the ballot: Vice President Louis L. Jacobs, Michael J. Novacek; Member-at-Large Anthony D. Barnosky, Lawrence J. Flynn.

The Nominating Committee is very pleased with this list. As a Society, we have an embarrassment of riches in terms of extraordinarily capable individuals eligible for such offices although the final list was not easy to come by, the task of selection was a happy one. (Jason A. Lillegraven, Chair)

Richard Estes Memorial Award Committee

The Committee for the Richard Estes Memorial Award for graduate student research in nonmammalian vertebrate paleontology is pleased to announce the 1993 award recipient, Michael Kass, Earth Science Museum, Brigham Young University. Michael's project is entitled Osteology, functional morphology, and taxonomy of a mosasaur from the Mancos Shale, Colorado. (Gregory Pregill, Chair)

Romer Prize Committee

At the 1992 Annual Meeting, the Romer Prize Committee proposed changes in the application procedures for the Romer Prize which were subsequently approved by the Executive Committee and used for the first time this year. These procedures require each

applicant to submit a short (1-3 double-spaced pages) paper describing the study they wish to present in addition to the standard abstract. These papers are reviewed by the committee and used to select finalists to present their work in the Romer Prize session; decisions are based on the scientific quality of the study. Additionally, the committee felt that students should be expected to compete no more than twice, although exceptions could be made, and that all students should be able to compete at least once. To assist the committee in following these guidelines, students were asked to submit information on educational background, including degrees completed and in progress, expected date of completion, and previous years in which they competed for the Romer Prize. The Romer Prize applications are due two weeks before the regular abstracts to allow the committee time to review them and send a list of participants to the program officer.

In previous years, some committee members had felt that it was difficult to screen based on the abstracts. The committee members generally felt that the short papers submitted this year did provide enough information to judge the scientific merits of the research and that the new application procedures were successful. In terms of logistics, having applications due two weeks before the abstract deadline allowed sufficient time for the chair to distribute copies to the committee members and receive their replies. This year the Committee received eight applications for the Romer Prize, and the committee members agreed to accept all of the applicants for consideration for the Romer Prize.

The members of the Romer Prize Committee would like to extend their congratulations to this year's winner, Raymond R. Rogers (University of Chicago) for his paper titled Systematic patterns of time-averaging in the terrestrial vertebrate record: Two Medicine-Judith River interval, Montana. We would also like to congratulate Mary H. Schweitzer, who received an Honorable Mention for her presentation titled Biomolecule Preservation in *Tyrannosaurus rex*. We thank all of the students who competed for their hard work and excellent presentations.

I would like to thank the members of this year's committee: Catherine Badgely, Judd Case, Margery Coombs, Lance Grande, Larry Flynn, John Flynn, Michele Morgan, and Dave Weishampel. (Kathleen Scott, Chair)

Romer Prize Winner Raymond Rogers

I received an undergraduate degree in geology from Northern Arizona University in 1985. After taking a year off to travel and finagle my way into graduate school, I went on to study under Robert Fields and Jack Horner at the University of Montana, where I received a master's degree from the Department of Geology in 1989. My master's thesis explored the sedimentology and taphonomy of three dinosaur bone beds in the Two Medicine Formation of Montana. Presently, I am a Ph.D. candidate in the Department of Geophysical Sciences at the University of Chicago under the guidance of Susan M. Kidwell. My dissertation research, which is rapidly nearing completion, focuses upon sequence stratigraphy and taphonomy. Specifically, I am interested in applying sequence

stratigraphic methods in fluvial records and resolving geologic controls upon large-scale patterns in the preservation of nonmarine vertebrates. I plan to continue this type of integrated geologic-taphonomic research in the future.

Education Committee

The Education Committee was established to meet a variety of concerns expressed by SVP members, including coordination of our various prizes and educational outreach at all levels. The members of the committee also feel that the committee's charges should be broadened to include a range of support services for graduate students and to address issues relating to women and minorities. We suggest that the role of this committee be redrawn to include the following general areas: recruitment and retention of women and minority members of the Society; educational programs, including public outreach, precollege, and college-level programs; and graduate student education. Some of the committee's concerns and areas of focus in each area are summarized below.

The Education Committee has contacted representatives of committees on women and minorities from several societies, and David Weishampel represented SVP at a special symposium on women and minorities sponsored by the Ecological Society of America. For our society, as for most others, the issues of women and minorities are separate. SVP, like these other societies, appears to have a large number of women graduate students, but progressively fewer women at higher academic ranks. This suggests that programs for women should be designed to keep women in the field, and might include formal or informal mentoring networks. The underrepresentation of minorities in vertebrate paleontology marks this as an area of serious concern. Any efforts made by the society in this area would, at least initially, have to be at college or precollege level programs which begin to build a pool of potential graduate students. Several other societies have or are considering programs for minority students at the annual meetings. It may be practical for SVP to coordinate efforts with other societies. We are also coordinating with the American Society of Mammalogists to set up an information clearinghouse on programs for women and minorities. This clearinghouse will provide information on existing programs at universities and museums which can be used by individuals who wish to organize programs at their own universities. Members are encouraged to send descriptions of existing programs to Kathy Scott for inclusion in the clearinghouse.

In discussions at the Annual Meeting, the Education Committee and the Executive Committee agreed to develop programs which could be distributed to secondary school teachers for use in classroom instruction. These programs would not only teach about fossils and expose children to paleontology as a career, but could also help interest more children in the sciences. A number of members have expressed their interest and support for this effort and have already sent materials developed for classroom use. The committee is in the process of coordinating materials and developing ways to distribute materials. This promises to be an important and exciting area for the society, and we would like to encourage SVP members who have developed educational materials to

share them with the committee. We would also like to hear from SVP members who are interested in working in this area.

Although the Patterson, Estes, and Romer prizes provide support and recognition to our students in several different areas, we feel that it is important to support a wider range of graduate student research. To provide funds, the Executive Committee voted to use the proceeds of this year's auction to support educational projects. These funds will be used to establish a Society of Vertebrate Paleontology Fellowship in the amount of \$2,500. This fellowship will provide support to an outstanding graduate student during the final 18 months of a Ph.D. degree. The remainder of the proceeds will be used for other educational projects. One of the major goals is to establish a Grants-in-Aid-of-Research fund for graduate students which could be used to fund museum travel and other forms of research not now covered by any of our prizes or awards. The Education Committee is also interested in developing educational support programs for graduate students. Ideas under discussion include a program to provide reviewers for graduate student presentations at the annual meetings and career-development workshops for graduate students. Dan Bryant is organizing a meeting of graduate students to discuss ideas at the 1994 Annual Meeting.

The members of the Education Committee would like to ask for your ideas and comments on these projects. Please feel free to contact any of our members.

I would like to thank the members of this year's Education Committee: David Weishampel, Mary Maas, and Dan Bryant. (Kathleen Scott, Chair)

Outreach Committee

The Outreach Committee has prepared the following draft of the responsibilities of the professional community to the amateur community. The Committee requests comments by members of the Society on this draft. Please address your comments by 15 April 1994 to either Sally Sheldon, Co-Chair SVP Outreach Committee, San Diego Natural History Museum, Balboa Park, P. O. Box 1390, San Diego, CA 92112; or to Richard K. Stucky, Denver Museum of Natural History, 2001 Colorado Boulevard, Denver, CO 80205 (e-mail at rstucky@csn.org). Comments will be incorporated into the draft during the midyear meeting of the Outreach Committee to be held at the Western Association of Vertebrate Paleontology at Denver from 14-16 April 1994. A revised version will be submitted to the Society at the Annual Meeting in Seattle.

RESPONSIBILITIES OF

PROFESSIONAL VERTEBRATE PALEONTOLOGISTS

TO THE AMATEUR COMMUNITY

Outreach Committee, Society of Vertebrate Paleontology

Draft, 27 September 1993

The fundamental goals of the Society of Vertebrate Paleontology are to provide new knowledge on the history of fossil vertebrates and to foster the scientific, educational, and personal appreciation of fossil vertebrates by amateur, student, and professional paleontologists and the general public.

The ultimate aim of the Society is to enrich the enjoyment, appreciation, increased knowledge, and understanding of fossil vertebrates as the fundamental evidence of past vertebrate life on our planet.

In collecting and conserving fossil vertebrates, the professional community assumes a curatorial as well as an educational trust.

The professional community recognizes that it must provide training, field, and laboratory experiences to students, educational institutions, the amateur community, and the general public.

The professional community shall offer its expertise to the educational, public, and amateur communities. The professional community recognizes that members must communicate their needs and principles in research and education.

The professional community shall recognize the valued contributions of amateurs to research and education. The professional community recognizes the status of responsible amateurs as colleagues, and will acknowledge and respect their contributions to paleontology.

Institutions with collections held in public trust will guarantee that specimens will be kept in the public trust and will be made accessible for legitimate educational and scientific purposes.

The professional community will maintain the highest ethical standards in scientific research and education.

(Richard K. Stucky)

Sponsorship of Russian Colleagues

With the death of E. C. Olsen a few weeks ago, we have lost a valued friend and colleague. Ole's contributions to our field were numerous and varied. Many years ago he recognized the need to strengthen our ties with the vertebrate paleontological community in Russia. He acted and sponsored the associate memberships of five of our Russian colleagues.

Obviously the need and opportunity to strengthen ties with our Russian colleagues have increased and their financial situation has not improved. Already two of our members have volunteered to help assume Ole's sponsorship of two associate members. Are there other members interested and in a position to support an associate membership, which will cost \$30.00 per year? We also know of a gentleman in Slovakia, Martin Kunderát, who is seeking sponsorship.

If you are interested in continuing this tradition established by Ole, please contact Bill Clemens or John Bolt. (The Executive Committee)

Richard Estes Memorial Award for Graduate Research in Nonmammalian Vertebrate Paleontology Call for Applications

The Richard Estes Memorial Fund was established to enhance graduate student research by providing a cash prize of \$500.00 awarded at the annual meeting of SVP. The competition is open to all graduate student members of the SVP. The award is directed toward research in nonmammalian vertebrate paleontology, with emphasis on systematics, morphology, biogeography, and paleoecology.

Items supported include consumable supplies or expendable equipment; living expenses in the field, at a research station, or museum; and travel expenses. If travel by automobile is required, the current IRS per mile allowance may be used to calculate costs. Items not supported include travel and/or conference costs solely to attend the SVP annual meeting, permanent equipment, salary, or overhead.

Submit a three-page maximum (single-spaced) description of the project sufficiently detailed to be evaluated by the Estes Award Committee, a budget showing clearly the amounts and purposes for which the award will be used, and a letter of support from the applicant's project advisor or major professor. Applications lacking requested information will not be reviewed.

Completed applications must be received by July 1, 1994. Send all application materials to: Gregory Pregill, Chair; Estes Memorial Award; Department of Biology; University of San Diego; San Diego, California 92110-2492.

Important Notice About the 1994 SVP Meeting Program

As our annual meetings grow in size (nearly 800 in Albuquerque!), we face the embarrassment of riches in the number of members who want to give presentations. Considering how to make our meeting programs as good and effective as possible, the Executive Committee has approved some changes, to begin with the 1994 meeting.

Bob Sullivan has stepped down as Program Chair, with the thanks of all SVP members for a fine job. To succeed Bob, we've appointed a Program Committee of Kevin Padian, Don Prothero, Lance Grande, and Liz Barnosky. Their job will be to review abstracts and guide the future evolution of the program, for which they solicit the feedback of all SVP members. The Society has grown over the years in size, purpose, and professionalism, and this means that occasionally it needs to review procedures to make the best use of our resources and opportunities.

Program Organization. It seems that most SVP members would like to cut down on the number of platform presentations, because there are too many concurrent sessions. Accordingly, the Committee will limit this number, and will encourage more use of posters and other presentation media (computers, videos, displays we'd like to encourage creativity). There is a growing feeling that many presentations given as talks would be at least as effective in a different format. For example, presentations that are mainly a litany of characters used to construct a cladogram; anatomical description of a new specimen or taxon, with taxonomic remarks; comparisons of faunal lists from localities used in local biostratigraphic correlation; and so on, are often more effective when viewers have the opportunity to see and discuss evidence at length, instead of simply watching slides flash past.

To try to encourage greater effectiveness of the program presentations, the Committee will implement the following:

1. Abstracts will be due by 3 May 1994 to the Program Officer, Kevin Padian, Museum of Paleontology, University of California, Berkeley, CA 94720. (Romer Prize abstracts will still be due a month earlier to that Committee.) The Program Committee will review the submitted abstracts and will either accept them for oral or poster sessions, redirect them to the poster session if the oral sessions are full (or vice versa), or reject them. Authors of redirected abstracts will have the choice of accepting redirection or of withdrawing the abstract.

2. Although there will be space limits for both oral and poster sessions, the poster session will be larger than in previous years, and will run for an entire morning or afternoon without opposing oral presentations. During at least part of this time, poster authors are asked to be stationed at their presentations, to maximize fruitful discussion for all concerned. Any other special kinds of presentation will be accommodated at this time. Posters will be left up for at least two days. We will try to group posters of similar interest, as far as practicable.

3. Platform presentations are most effectively used by authors who have ideas of broad significance to discuss, and that require some visual support. Authors may wish to consider submitting related abstracts for both platform and poster session. For example, a poster might document the character matrix and alternative trees that realign a traditional phylogenetic grouping. Based on these data, a platform talk might discuss the biogeographic and biostratigraphic implications of major importance; or sequences of functional evolution and divergence within subclades, based on experimental or morphometric data. If you would like to consider this, feel free to consult the Program Officer in advance with any questions. Note that both abstracts will be evaluated by the Committee on their independent merits.

4. No-shows: submission of an abstract constitutes an agreement by the author to present in person the submitted research. Because of space limits, it is even more important that authors honor this commitment. If a sudden emergency prevents an author's attendance, the obligation remains to have a colleague deliver a talk or poster. No-shows should not expect consideration of their abstract at the next meeting.

Abstract Criteria. Abstracts should meet the standards of any peer-reviewed, professional publication. To enable readers, including the Program Committee, to understand and evaluate the importance of the research, the findings should be clearly spelled out (do not give a table of contents of the research). Requirements of format should be met: for the present, abstracts will continue to be printed camera-ready and will not be retyped by the Program Committee. The implications of your research for broader questions in the field should be clearly detailed; this criterion is of prime importance for the Program Committee in structuring the program. Please contact one of the Committee members in advance of the abstract deadline if you would like to have these criteria or other questions clarified.

Other Issues. (1) It is commonly felt that the abstract deadline is too early. Unfortunately, this timetable is imposed on us by printing and mailing deadlines. However, if you have a late-breaking, newsworthy discovery that you would like to present at the SVP meeting, please contact the Program Officer as soon as you can. The Annual Meeting is increasingly attended by journalists, and this is good publicity for the Society. (2) Some members report that they cannot get financing from their institutions to attend the meeting without presenting a talk. (If this is not true in your case, please discuss it with us ASAP.) At the Albuquerque business meeting, we half-seriously proposed a dummy session of talks that would answer this problem. (Abstracts would not be published.) Is this solution acceptable? Ethical? Got a better one? Let us know.

The Executive Committee and the Program Committee hope that by instituting a review of program abstracts, and by encouraging more posters and alternative presentations, the Annual Meeting programs will be more effective in communicating ideas and information. IN this procedure we are following the lead of other respected scientific societies, including the GSA, ASZ, and AAAS. We hope that members will seize the creative opportunity that this presents. We welcome your comments and questions at all

times, and the sooner the better, so that we can implement them at our next Annual Meeting. (Kevin Padian)

Student Meeting at Seattle

The SVP has made a strong commitment to education in the past two years. Examples of this include the establishment of an Education Committee and two new student awards, the Estes Prize (first awarded this year) and a Predoctoral Fellowship (to be awarded in 1994). The goals of the Education Committee are to explore ways the SVP can contribute to teaching students at all levels about vertebrate paleontology, recruiting and keeping new students, and developing programs for minorities and women. In addition to new awards, the committee is working on other projects, including organizing a source file for student research awards and seminars on job searches, and seeking larger funding sources for society-sponsored educational projects.

The Education Committee seeks new ideas and opinions from students for the committee to consider. Dan Bryant, a student and member of the committee, is organizing a student meeting at the 1994 SVP annual meeting in Seattle. The purpose of this meeting will be to gather information on student concerns and ideas for consideration by the Education Committee and other committees. Additional subjects for discussion could include the organization of future student meetings at each SVP, representation of students on other committees, and election of student representatives to gather ideas and speak for our concerns.

Scheduling of the meeting has not been determined. An announcement will be made before the meeting, once a program has been established.

Please feel free to contact Dan or other Education Committee members (Kathy Scott, David Weishampel, and Mary Maas) with any ideas, opinions, and comments you may have. You may reach Dan at Department of Vertebrate Paleontology; American Museum of Natural History; Central Park West at 79th Street; New York, NY 10024-5192. Phone (212) 769-5810; fax (212) 769-5842; e-mail: jdb9@cunixb.cc.columbia.edu. (Dan Bryant)

Bryan Patterson Award

Application forms for the 1994 Bryan Patterson Award for *student field work in vertebrate paleontology* were included in the mailing to members in January; additional application forms can be obtained from the Secretary. Both undergraduate and graduate students are eligible to apply. Applicants and their sponsors must be SVP members or pending members.

Proposals for the Patterson Award must be for field work, and particular consideration will be given to proposals for field work that is innovative rather than routine, venturesome rather than predictable, unusual rather than run of the mill. There will be either one award of approximately \$1,000 or two awards of about \$500. The deadline for receipt of proposals is 15 April 1994. The winner(s) will be decided by 1 June 1994. (Ken Rose, Chair)

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ARGENTINA

Museo Municipal Carmen Funes, Municipalidad de Plaza Huincul

Since our last report, many things have happened in these Patagonian latitudes. In early 1993, Rodolfo Coria directed the remodelling of the exhibit hall of the Museo Carmen Funes, achieving a more attractive circuit separated in disciplines. Also, he taught many short courses about dinosaurs to primary school teachers. Leonardo Salgado was nominated director of the Museo de la Universidad Nacional del Comahue (Neuquen). At midyear, the museum moved to the subfloor of the university's library. At present, remodelling of the laboratory, collection deposits, and exhibit hall are being made.

Geologist Susana Heredia joined the research staff of the MUNC. She is doing field work in the area of Cinco Saltos (Rio Negro Province). The field work is involved in detailed stratigraphic measure of two sections of the continental Upper Cretaceous.

The Dinosaurs from Neuquen Basin project has produced new and interesting results. Leonardo is involved deeper and deeper in the titanosaur problem. In turn, he and Rodolfo have finished the description and phylogenetic analysis of a new iguanodontid ornithopod from the Cretaceous of Patagonia. That paper was submitted to the *JVP*. They are anxiously waiting for the reviewers' suggestions. Also, their paper about a new ceratosaurian theropod is nearly ready. As soon as Rodolfo finishes the illustrations, it will be submitted to the *JVP*.

The release of Jurassic Park closely coincided with the discovery of a huge and amazing theropod in the outcrops of the Rio Limay Formation (Albian Cenomanian) in Villa El Chocon (Neuquen Province). The fossil was found by Ruben Carolini, an enthusiastic dinosaur hunter from Villa El Chocon. Many hundred tons of overburden were removed in over a month and an almost complete skeleton of an enormous theropod was uncovered. Its size is really unusual for the theropod fauna known from South America. For example, the specimen bears a femur of 144 cm in length. It is not a ceratosaur but seems to be closer to primitive Tetanurae. The finding was widely covered by national and international media. Many people collaborated in the field: Prebiterio Pacheco, Enrique Maglieta, and Nicolas Ockier from the Museo de la Universidad del Comahue; and Daniel Hernandez, Carlos Otaño, and Omar Garces from Museo Carmen Funes.

A short paper is being prepared to be presented at the next SVP meeting in Seattle. Of course, this depends on the financial situation (contributions are always welcome). Finally, Jorge Calvo moved to Chicago. He continues working on his MS and has visited many American museums. (Rodolfo A. Coria)

CANADA

Canadian Museum of Nature

Steve Cumbaa and Richard Day, along with mineralogist Scott Ercit, are examining thin sections from a Cretaceous (Cenomanian) bone bed at the DH-1 locality on the Carrot River, Saskatchewan. They hope to learn more about the taphonomy and diagenesis of this rich deposit, and to compare it to other bone beds from Western Interior Seaway deposits. Steve and Tim Tokaryk of the Royal Saskatchewan Museum reported on the fauna and paleoenvironment of this site at the Albuquerque meeting. J. D. Stewart was a gracious host to Steve during his brief visit to the LACM collections. They are collaborating on aspects of the selachian faunas from the Carrot River localities. Steve is also working with Dick Harington on a perch-like fish recovered from a Pliocene locality on Ellesmere Island, and on a small, varied collection of Late Pleistocene/Early Holocene fish bones for Phil Youngman's analysis of the fauna from Lafloche Cave near Val des Monts, Québec.

The fossil fish collection at the CMN has begun the slow process of change to a systematic arrangement. The fishes are now housed together in approximately 40 cabinets; another 15 or so need to be purchased to house the overflow and specimen lots coming back from long-term loans. Hopefully this project will be completed within the next two to three years.

With the help of Wes Blake (Geological Survey of Canada) and Otto Salvigsen (Norsk Polarinstitt), Dick Harington is studying Quaternary vertebrates of Svalbard. Several of the marine mammal remains from raised beaches have been radiocarbon dated to the Early Holocene.

Dick, John Tener, and Clayton Kennedy just returned from field work on Ellesmere Island, where they collected more Pliocene vertebrate remains, including specimens of birds, small beaver, and bear. Rabbits or hares seem to have been fairly common then, echoing the present situation whereby we were greeted regularly at the site by roving bands of up to 20 Arctic hares! (Dick Harington)

Royal Ontario Museum

Chris McGowan has named a new species of large, long-snouted ichthyosaur from the Lower Jurassic of England, *Leptopterygius solei*. He also has a paper in press on the most complete *Shastasaurus* known, also a new species.

Since returning from his adventures in Niger, Hans Sues has started to study a partial skeleton referable to the theropod dinosaur *Chirostenotes*. This specimen was collected in 1923 but was not recognized until recently. It is noteworthy because it includes a well-preserved braincase and vertebrae from all parts of the column. Kevin Doyle and Hans have completed study of a well-preserved partial skull of a slender-snouted *Rutiodon*

from the Upper Triassic of Pennsylvania. Kevin Doyle is now planning to sort out the complicated taxonomy of this phytosaurian taxon for his Master's thesis.

Kevin Seymour reports that the installation of the new compaction storage system is nearing completion; we hope to be open again for business by early 1994. This installation gave him a chance to reorganize the collections and to create a type collection, among other things. (Hans Sues and Kevin Seymour)

Department of Geological Sciences, University of Saskatchewan

William Sarjeant is presently engaged in writing a book on the history of study of reptile footprints with Geoffrey Tresise (Liverpool City Museum, England); the provisional title is Track Record. The long-delayed joint work with Wann Langston, Jr., Vertebrate footprints and invertebrate traces from the Chadronian (Late Eocene) of Trans-Pecos, Texas is shortly to be published as Texas Memorial Museum Bulletin No. 36. It is hoped that this will serve as a prelude to further researches on Tertiary mammal footprints. A general account of the history of footprint study entitled Footprints in the Sands of Time was presented at the first South American paleoichnological congress in Santa Rosa, Argentina, in late June. A Spanish version has been submitted to *Ameghiniana*.

The four parts of the Halstead Memorial Volume in *Modern Geology* (Vol. 19) were published simultaneously in October 1993. In addition to editing this work, Bill contributed an extended biography of L. B. Halstead (Vol. 18:5 59;), a list of his writings prepared jointly with Linda F. Dietz (Vol. 18:61 81), and a posthumous paper with Beverly entitled *Scrotum humanum* Brookes the earliest name for a dinosaur? (Vol. 18:221 224). The half-tone plates for the volume were very poorly reproduced; the reissue of the Halstead Volume as a book, with better illustrations, is being contemplated by publishers Gordon & Breach.

Chapters on the early history of the study of dinosaurs and their footprints are in preparation, as invited contributions to two forthcoming collective studies. In addition, Bill has reviewed several works on the lives of vertebrate paleontologists and the history of geological institutions for *Geoscience Canada* and *Earth Sciences History*. (William A. S. Sarjeant)

Provincial Museum of Alberta

It's now over a year since Harold Bryant left the University of Calgary and journeyed north to take the position of Curator of Mammalogy at the PMA. Although the collections and research responsibilities of this position are primarily neontological, Harold is managing to keep his hand in regarding things paleontological. The long-awaited (at least by the author!) paper on the carnivorans and creodonts from the Calf

Creek Local Fauna, Cypress Hills Formation, Saskatchewan, appeared in the November 1993 issue of *Journal of Paleontology*, and Harold contributed a chapter (with Tony Russell, University of Calgary:) on carnassial functioning in the nimravid sabertooth *Dinictis* and *Hoplophoneus* for Jeff Thomason's volume *Functional Morphology in Vertebrate Paleontology*, which should appear early in 1994. Harold also contributed a chapter on the Nimravidae for Don Prothero and Bob Emry's upcoming book, *The Terrestrial Eocene Oligocene Transition in North America*. Harold recently contributed a paper on the jaw mechanics of the sabertoothed felid *Smilodon* for the upcoming publication honoring Rufus Churcher on his retirement. Harold spent three weeks during September-October in Heilongjiang province, China, impersonating Jim Burns in the archaeological/paleontological excavation of a late Pleistocene site. This venture is a collaborative project between the PMA and the Archaeological Institute of Heilongjiang. Harold has applied for adjunct status in zoology at the University of Alberta which will facilitate involvement with VP and other graduate student research and supervision, and other departmental activities.

Jim Burns has not been involved in any blockbuster exhibits after two successful Dinamation shows on whales and on mammalian and reptilian extincta. Several coauthored papers are in review/press on topics such as paleontology and the *alleged* ice-free corridor; late Pleistocene carnivores near Edmonton (including *Arctodus*, *Panthera leo atrox*, and *Canis lupus*); an insect fauna from a Holocene cave in the Rocky Mountains of Alberta; stable isotope studies of Holarctic mammoth bones; and paleozoogeography of western Canadian prairie dogs. The first anniversary of the completion of the Columbian mammoth mount has come and gone. It was the third(?) cast of the Huntingdon mammoth from southeastern Utah to be mounted, and its unveiling was a centerpiece of the Provincial Museum's 25th anniversary celebrations in December 1992. Our new logo prominently features a woolly mammoth. (Harold Bryant and Jim Burns)

Prehistoric Animal Structures (P.A.S.T.), East Coulee, Alberta

This is the first article contributed by P.A.S.T. since its foundation in 1989. The company specializes in mounting and casting skeletons, and *does not sell original fossils*. We make casts from the molds of our clients or from those of other institutions. We occasionally make molds of original specimens; however, our specialty is mounting skeletons, either casts or original bone.

At the time of writing, P.A.S.T. members have mounted 293 specimens, since or before the inception of the company. Our mounts are in many museums, most notably the Science Museum of Minnesota in Saint Paul. In 1991 we erected a *Diplodocus*, two camptosaurus and a dromeosaur on top of a centrosaur skull. In 1992, P.A.S.T. mounted a number of skeletons for the Field Museum in Chicago, including remounts of their *Apatosaurus* and *Albertosaurus*, as well as assembling a cast of *Brachiosaurus altithorax*.

Having mounted a number of sauropods in the last few years, we were able to make some observations on the articulation of the tail and neck of these giants as well as on the weight distribution of the anterior part of the skeleton. We hope to present a summary of these observations at the next SVP meeting.

Recently Michael Ryan worked with the company before heading off to Niger with the daring young folks from the University of Chicago.

P.A.S.T. will also prepare original material in exchange for casting rights. We are now preparing a 70% complete skeleton of *Elasmosaurus* which measures more than 12 m long. We hope this will be an interesting specimen for Betsy Nicholls to pore over and a spectacular display skeleton. Mounted casts will be made available for sale under license from the proprietor museum. (Gilles Danis)

FRANCE

Laboratoire de Paléontologie des Vertébrés, Université Paris 6

Petit et actif (freely translated from small is beautiful): although its surface has been halved by a decision of the university, the department still welcomes students and colleagues. All are welcome to contribute to our adaptation to new working conditions and to the survival of vertebrate paleontology and paleoanthropology at the University of Paris.

Jean-Claude Rage now has a dozen papers in press, which have not yet been published for various reasons; hopefully, some of them should be out soon. At the present time, Jean-Claude is deep into the Cretaceous, working on Squamata from the French Cretaceous with D. Puit, on the terminal Cretaceous herpetofaunas from India with G. V. P. Prasad, and on the paleogeographic relationships of India with J. J. Jaeger. Thanks to A. Richter (Mainz) and C. Werner (Berlin), he has examined remarkable new squamates from the Cretaceous of Europe and Africa, which will be studied and published on with the above-mentioned German colleagues. He has just finished two chapters for a book on amphibians edited by H. Heatwole; one of them is on the phylogeny and origin of the Lissamphibia, the other one, with Z. Rocek, is a digest on *Triadobatrachus*. Finally, Jean-Claude has recently described a very peculiar urodele from the Cretaceous of Gondwana (with L. G. Marshall and M. Gayet).

Marc Augé has started a study of the dynamic evolution of lizard faunas and their interactions with other groups, especially mammals. His first paper on that topic has just appeared in *Palaeovertebrata*.

As usual, Eric Buffetaut has spent a total of several months in the field in 1993. With his wife Haiyan Tong and his Ph.D. student Valérie Martin, he first spent a month in Thailand with Varavudh Suteethorn and Yaowalak Chaimanee. A new Jurassic locality

was explored in southern Thailand; it yielded a few crocodile and fish remains, and several large turtles (now under study by Haiyan). In northeastern Thailand, the Upper Jurassic of the Phu Wiang area proved as productive as ever. Abundant remains of sauropod dinosaurs were found, including many postcranial elements of very small juveniles, which will be described in Valérie's thesis. In addition, vertebrae and limb bones of an unexpected small theropod were found: they clearly belong to a relatively advanced ornithomimosaur, which is much more progressive than the roughly contemporaneous *Elaphrosaurus* from Tendaguru; the study of that material will clearly result in a reassessment of the early history of ostrich dinosaurs. In an older, Middle Jurassic formation of the Khorat Plateau, the first evidence of a post-Triassic labyrinthodont from Southeast Asia was found, in the form of a temnospondyl intercentrum, to be described in the *Neues Jahrbuch*. Our Thai-French group reviewed the Mesozoic vertebrate biostratigraphy of northeastern Thailand and gave a preliminary review of Thai sauropods in two papers delivered at the International Symposium on Biostratigraphy of Mainland Southeast Asia in Chiangmai in February.

Eric's other field activities have been in southern France, with Jean Le Loeuff and his group at the Dinosaur Museum in Esperaza. The summer was devoted to the Early Maastrichtian dinosaur localities of the Upper Aude Valley, which proved as productive as usual, with a dominance of titanosaurid sauropods, mingled with remains of crocodiles, turtles, ankylosaurs, and the ornithopod *Rhabdodon*. Another important dinosaur, excavated with the help of Varavuch Suteethorn from Bangkok, was one of the best preserved dinosaur nests hitherto found in that part of southern France. Unfortunately, embryos and babies remain elusive.... Shorter field campaigns were spent at the Late Maastrichtian Montplaisir locality in the eastern Corbières, where many more specimens of the hadrosaur-dominated vertebrate community were found, documenting more and more clearly the faunal change that apparently took place in western Europe between the early and late Maastrichtian. In the same area, an older locality, of probably Campanian age, was also found; it has yielded fishes, crocodiles, and several kinds of turtles. Farther east, in Provence, our group also spent a few very wet but profitable days excavating a new site found by P. and A. Mechin in the Upper Cretaceous of Fox-Amphoux.

Eric's enduring interest in Asian dinosaurs led him to Uppsala to examine the type of the hadrosaur *Tanius sinensis* Wiman, from Shandong (China). As expected, and contrary to Rozhdestvensky's and Taquet's opinion, *Tanius sinensis* proved to be completely different from *Tsintaosaurus spinorhinus*; this is discussed in a paper in the *C. R. Acad. Sc. Paris* (317, II, 1255-1261, 1993), in which Eric and Haiyan also confirm E. E. Young's reconstruction of *Tsintaosaurus* with a nasal spine. Eric's visit to the Uppsala collection also resulted in the unexpected find of fairly good but hitherto almost completely undescribed remains of an ankylosaur from the Upper Cretaceous of Shandong, collected back in 1923 by Tan and Zdansky; Eric plans to describe them in the near future.

Eric's quest for forgotten dinosaur remains in French collections is going on. Among recent finds are an incomplete *Iguanodon* femur from the Early Cretaceous of the eastern Paris Basin in Chalons-sur-Marne, theropod postcranial remains from the Callovian in Houlgate, a small seaside resort on the Normandy coast, and more sauropod and theropod

material from the Upper Jurassic of the Boulonnais (to be studied with Michel Martin). A historically interesting find is that of a partial theropod sacrum, of probably Callovian age, at the University of Besançon. It seems to be part of the *Megalosaurus* material seen there by William Buckland in 1826, and briefly mentioned by him in his *Bridgewater Treatise*.

Haiyan Tong is working on several problems of rodent systematics. The position of the spiny mouse *Acomys* is one of them: Haiyan's morphological comparisons with murids and gerbillids show that it is clearly a murid, not a gerbillid as suggested by some recent DNA-hybridization evidence from Montpellier. In parallel to her rodent studies, Haiyan is also becoming interested in Mesozoic turtles: she is currently preparing the specimens from the above-mentioned new locality in the Jurassic of southern Thailand, and she has completed a preliminary study of turtle material from a new vertebrate locality in the Upper Cretaceous of the eastern Corbières (southern France).

Among our visitors in 1993 was Halszka Osmolska from Warsaw, who brought with her the *Gobiosuchus* material from the Upper Cretaceous of Mongolia. Halszka, Eric, and Stéphane Hua have started a detailed description of this very peculiar small crocodylian, which should be continued when Eric visits Warsaw in 1994.

Stéphane Hua shares his time between marine crocodylians and his national service. He is going on with his study of blunt-toothed teleosaurids, with a preliminary study of *Machimosaurus mosae* published in the *C. R. Acad. Sc. Paris*, and a paper in press in the same journal, with Patrick Bignaud (Poitiers), on the problem of the definition of *Steneosaurus obrusidens*. Another paper, to be published by the Société géologique de Normandie, bears on the modifications of the axial skeleton in the Metriorhynchidae.

Gilles Cuny defended his thesis on the evolution of vertebrate faunas at the Triassic Jurassic boundary in Europe on 10 December 1993. He is not preparing a series of publications on that topic, including one with Nathalie Bardet on the absence of a crisis among vertebrates at the end of the Triassic. At the first European Paleontological Congress in Lyon, he presented a general review of vertebrate evolution at the Triassic Jurassic boundary in the Jura region. Excavations are going on there, especially at Lons-le-Saunier, where more than 200 prosauropod bones have now been found. Gilles also attended the Nonmarine Triassic Symposium in Albuquerque, where he reported the discovery of mammal teeth in the Phaetian of the Jura. Besides looking for a post-doc opportunity, he is now preparing a paper on a megalosaur femur from the Callovo-Oxfordian of eastern France, with E. Buffetaut, G. Lachkar, and D. Contini.

Xabier Pereda Suberbiola defended his doctorate on ankylosaurian dinosaurs from Europe in December. As a result of this work, several papers on the systematics of European nodosaurs are being prepared. In September, Xabier and Nathalie Bardet took part in the excavations at the Late Cretaceous Laño locality, coordinated by Humberto Astibia. The group from the University of Bilbao has washed and screened two tons of sediment and collected new vertebrate remains, especially dinosaurs (a titanosaurid sauropod, a theropod, the ankylosaur *Rhabdodon*, and the ankylosaur *Struthiosaurus*). A

meeting on the geology and paleontology of the Laño locality is being organized for 1994; it will be attended by various European specialists and will result in the publication of a monograph. In July, at the 1st European Paleontological Congress (Lyon), Xabier, Nathalie Bardet, Humberto Astibia, Carmelo Corral, and Marc Floquet have presented the first results of the environmental study of Cretaceous vertebrate faunas from the Basco-Cantabrian Basin. At the Cambridge Symposium on Vertebrate Paleontology and Comparative Anatomy, Xabier displayed a new reconstruction of the ankylosaur *Struthiosaurus* and a paper on that topic is being prepared.

Nathalie Bardet continues her post-doctoral research on Mesozoic marine reptiles. An abridged version of her doctoral thesis is foreseen for *Palaeovertebrata*, and a paper on crises among marine reptiles is in press at *Historical Biology*. A revision of the Middle Jurassic plesiosaurs from Normandy has been published in the *Revue de Paléobiologie* and the description of a lower jaw of *Pliosaurus brachyospondylus* has appeared in the *Neues Jahrbuch*. This year, Nathalie took part in several meetings. At the 1st European Paleontological Congress she gave a paper on faunal assemblages and faunal renewals among marine reptiles during the Mesozoic. At ASS Evolution meeting in August in Montpellier, she discussed biological crises among Mesozoic marine reptiles. At the SVPCA in Cambridge (in September) she talked about remains of the giant fish *Leedsichthys* from the Middle Jurassic of Normandy. Finally, at the Journées Lennier in Le Havre in December, she presented the *Liopleurodon* and *Leedsichthys* remains from the Middle Jurassic of Normandy. Nathalie has also begun several revisions. She is revising the plesiosaurs *Plesiosaurus houzeaui* from the Upper Cretaceous of Belgium with Pascal Godefroit (Brussels) and *Eretmosaurus rugosus* from the Lias of England with David Brown (Newcastle), and the mosasaur remains kept at the Paris Museum. Finally, Nathalie has also started working on two marine turtles from the Upper Cretaceous of Touraine and Normandy.

Daniel Ahmad has finished his study of the new sphenodontid skeleton found in the Kimmeridgian lithographic limestones of Cerin in 1984. His work results in a very welcome simplification of the tangled taxonomy of Late Jurassic sphenodontids, with *Piocormus* and *Kallimodon* being considered as junior synonyms of *Sapheosaurus*. Daniel has now gone back to Canada, and we keep excellent memories of his stay among us.

After redescribing a remarkable Late Jurassic rhinobatid ray from the Boulonnais (lent from the collections of the Boulogne Museum by Michel Martin) as *Rhinobatis morinicus*, Lionel Cavin is beginning a doctoral thesis on biological crises among fishes during the Mesozoic.

Emmanuel Gheerbrant reports that his whole study of the mammals from the Paleocene of the Ouarzazate Basin (Morocco) is now in the hands of the editor of *Palaeontographica* (two manuscripts have been submitted as parts II and III of the study). In 1993, more field work was conducted in the Ouarzazate Basin with S. Sen and C. Abrial. About 1.5 tons of fossiliferous sediment were collected from the Ypresian and Thanetian mammal-bearing beds of the Adrar Mgorn and N'Tagourt localities, along with

small exploratory samples from new potential localities. This material is being processed in our lab. In addition, S. Sen sampled the stratigraphic column of the eastern Ouarzazate Basin from the Senonian Upper Red Beds to the Ypresian Ait Ouarithane Formation (a sedimentary thickness of 150 m), for a magnetostratigraphic study. A report on this work was presented at the evolution symposium in Montpellier.

Work on the Thanetian locality at Campo (Spain), in collaboration with G. Cuenca (Zaragoza), is going on. A new visit to the locality brought the total amount of sampled fossiliferous matrix to about one ton, half of which remains to be processed. The rather rare mammals hitherto recovered include condylarths and insectivores.

In addition, Emmanuel is now completing a study of the Maastrichtian mammals from Laño (Spanish Basque country), with H. Astibia (Bilbao). The first results will soon be submitted to *C. R. Acad. Sc. Paris*. They show that the Laño mammals are eutherians and probably belong to a new, still unnamed, family, which was clearly endemic to the late Cretaceous of Europe.

Emmanuel's work in collaboration with H. Thomas on the oligopithecine primates from Taqah (Early Oligocene of Oman) is now beginning. Although it consists only of isolated teeth, the study of this material should result in interesting new insights about the evolution of primitive simiiforms. The diversity of species (at least four, most of them new and some very small) is remarkable.

Brigitte Lange-Badré has put some order into the taxonomy of several European creodonts, with the help of P. D. Polly (Berkeley). Merci et bravo, David! With Marc Fizet, she attended the first European Paleontological Congress in Lyon in July, where they gave a paper on a Late Pleistocene paleoecosystem, using Marc's work on the stable isotopes of carbon and nitrogen. A few days of summer field work in the Kimmeridgian of the Causses enabled her to collect new turtle remains which will complement those already being studied with France de Broin (MNHN, Paris). These new specimens are from the same beds as the *Steneosaurus* published with Patrick Vignaux et al. from Poitiers.

Denis Geraads is still involved in the study of some groups of mammals collected in the Upper Miocene of northern Greece during the numerous field campaigns led by L. de Bonis and G. Koufos; projected papers include aardvarks and ancylotheres. The monograph on the contemporaneous localities at Kemiklitepe, in Turkey, excavated by the same team, plus S. Sen, is still in press. Denis has also started a joint project with E. Guleç, of Ankara University, on the ruminants from the Middle Miocene hominoid locality at Candir. However, most of his activities during the last two years have been directed toward the Plio Pleistocene of Morocco, within the programme Casablanca conducted by F. Z. Sbihi-Alaoui of the Institute of Archeology of Rabat (INSAP, dir. J. Benslimane), in cooperation with J. P. Raynal, of the University of Bordeaux. Denis is presently studying most of the mammalian fauna from the recently discovered Late Pliocene site of Ahl as Oughlam, by far the richest locality of the whole North African Plio Pleistocene (and probably second only to the Fayum for the whole Cenozoic!). The

first specific paper (on the suid *Kolpochoeurus*) is in press at *Geobios*, and others should appear in the near future. Besides, several Middle Pleistocene archaeological levels, containing rich faunas, have been excavated in the former Thomas quarries. The Rhino cave has yielded several skulls of white rhinos and a rich microfauna (shrews have been published in *Proc. Kon. Ned. Ak. Wet.*, 96(3), 1993; rodents and lagomorphs are in press in *N. Jb. Geol. Pal., Abh.*). Among other research topics, Denis mentions the bovids (with H. Thomas) and giraffids collected in Uganda by M. Pickford and B. Senut (to be published in a special monograph), the Villafranchian cervids from Blassac (*Ann. Pal.*, 78(3), 1992, with O. Boeuf and C. Guth), the phylogeny of the Bovini (*Zool. J. Linn. Soc.*, 104, 1992) and bovid diversity in the Plio Pleistocene of East Africa (*Hist. Biol.*, in press). He is also working on a multivariate analysis of the Plio Pleistocene faunas from the lower Omo Valley, collected by Y. Coppens, F. C. Howell, and coworkers. He wishes to acknowledge the constant support provided by Prof. Yves Coppens (Collège de France) to all these activities. (Eric Buffetaut)

GERMANY

Two International Fish Meetings in Germany in August 1993

Researchers on fossil fish could attend two meetings in Germany last August. In Göttingen the researchers on Paleozoic fish from 18 countries met together with the Subcommission for Devonian Stratigraphy to discuss the usefulness of microvertebrates for biostratigraphy (IGCP 328). In Eichstätt (Solnhofen area) the researchers on Mesozoic fish from 17 countries met for the first time.

The Gross Symposium in Göttingen celebrated the 90th birthday of the late Prof. Dr. Walter Gross. Gross, himself only marginally interested in biostratigraphy, laid the ground work for the use of microvertebrates for biostratigraphy by detailed description of shape and histology of scales of Silurian and Devonian thelodonts, acanthodians, etc. The presentations demonstrated that fish remains can be used for biostratigraphic correlations in the Silurian and Devonian, regionally and worldwide. For these time periods, the International Geological Correlation Program 328 will have good results. Fish remains may appear to be useful in younger formations, do even shark teeth and scales in the Jurassic. A subgroup discussed the possibility to approach the Pennsylvanian/Permian boundary especially with elasmobranch (xenacanth) teeth. Half of the presentations dealt with descriptions of new forms and faunas, a never-ending important part of our work.

Gross refuted the relationship of conodonts and vertebrates with help of histological investigations. The dispute is revived. Many different versions of histological similarities between conodonts and different agnathans have been proposed and repeated at the meeting, and also refuted. Homologization of hard tissues of conodont parts have been proposed which make no developmental sense in vertebrates; e.g., enamel on cartilage (the identification of both tissues seem to be unwarranted).

Papers on chondrichthyans, actinopterygians, lungfish, and actinistians were presented at the Eichstätt meeting. Besides some faunal descriptions, much new information on morphology of different actinopterygians were given. These have special importance for our understanding of early teleosts. The characters to keep together teleosts sensu lato (Patterson, 1977) seem not to hold up. Pycnodonts are suggested as another possible sister group of teleosts. Nevertheless, there are many characters which still diagnose teleosts sensu stricto (all teleosts with cycloid [including ctenoid] scales) above the level of pholidophorids. Within the basal teleosts, the old proposition that the elopomorphs are more primitive than osteoglossomorphs is resurrected; monophyly of the latter group is in doubt. Characters for other basal teleost groups are disappearing. The meeting brought together a group which studies an exiting field of open questions.

The proceedings of both meetings will be published; the Gross symposium in *Modern Geology*, the Eichstätt meeting as a separate volume (published by Verlag Dr. Pfeil) like the volume of the *Archaeopteryx* meeting in Eichstätt. (H.-P. Schultze)

INDIA

Geological Studies Unit, Indian Statistical Institute, Calcutta

Since the last report, our research program has been changing in all directions. For the last three or four years, work in the Pranhita-Godavari Valley could not be undertaken due to several problems in those areas. The unit had to undertake an alternative project in Damodar, Satpura, and Rewa Gondwanas with a view to select one basin for future work. These reconnoitry trips provided some basic information and the Satpura Gondwana Basin has finally been selected for future work. But we would still love to wander around the fossiliferous red beds of P-G Valley!

Saswati Bandyopadhyay regrets a typing error in the previous report (*SVP News Bulletin* No. 155). The suggested possible age for the Kota Formation should have read as Middle Jurassic, **not** Middle Triassic. She is continuing work on the new titanosaurid material from Maastrichtian sediments of central India jointly with Sohan L. Jain. During the last two years, Sohan made over half a dozen visits from Lucknow to Calcutta to complete the project. It is hoped that a paper will be ready by the summer of 1994. The absence of hind limbs in an association of sacrum and pelvis still remains a mystery. Besides the titanosaurid work, Saswati is also involved in the new project of Satpura Basin.

Tapan Roy Chowdhury is trying to wind up most of his work in view of his retirement this year. Recently he contributed an article titled J. B. S. Haldane and Palaeontology in a tribute volume published on the occasion of the J. B. S. Haldane Birth Centenary Celebration held in Calcutta.

T. S. Kutty has undertaken several geological projects in Satpura Basin and also continues his research on Late Triassic faunal elements of P-G Valley. Kutty has some

strange(!) material from the Gondwanas of P-G Valley which may be skull fragments of a pachycephalosaurid. He would welcome any photographs/illustrations/reprints of pachycephalosaurs. His recent publications includes Rose C-A Program in 'C' for producing high-quality rose diagram published in *Computers and Geosciences*, Vol. 18(9).

Kasturi Dasgupta has just completed her Ph.D. on the Middle Triassic archosauromorphs from P-G Valley. Her paper on Some contribution to the stratigraphy of the Yerrapalli Formation, P-G Valley, Deccan, India has been published in *Journal of the Geological Society of India*, Vol. 42.

Ms. Sanghamitra Ray joined the unit last year as a new research student. She will work on Permian dicynodonts of the P-G Valley. Dhurjati Sengupta manages to come fairly regularly in spite of his teaching load elsewhere. He is trying to finish a paper on the Indian metaposaurids. His latest papers include Metaposaurid amphibian from Tiki Formation of the Son-Mahanadi Valley of central India published in *Indian Journal of Geology*, Vol. 63(3), and Morphometrics of some Triassic temnospondyls published in *The Nonmarine Triassic*, New Mexico Museum of Natural History and Science Bulletin No. 3 (eds. S. G. Lucas and M. Morales).

Dr. Anne Warren of La Trobe University visited us for about two weeks during late 1992. We benefitted from her illuminating lectures on temnospondyls. She enjoyed examining new Triassic amphibian material in the GSU collection and advising on intricacies of amphibian osteology. She promised to make further visits in the near future to which we shall be looking forward. Dr. H. H. Schlich of Munich University also paid a short visit to the unit early this year. (S. Bandyopadhyay)

ITALY

Dipartimento di Scienze della Terra, Universita' degli Studi de Milano

The activity of our group is constantly increasing, following the new findings in the Triassic beds, as well as in the Pleistocene cave deposits. Andrea Tintori, with the help of G. Muscio from the Museo Friulano in Udine and many volunteers, organized the field trip in northern Italy for the first symposium on Mesozoic fishes held in Eichstätt last August. The field trip was very successful; it comprised visiting new Triassic and Cretaceous localities and seeing specimens at several museums. Friendly hospitality by the local museums and amateurs amazed the participants, so that they will remember this excursion not only for the vertebrate paleontology!

Andrea is preparing a first paper on the semionotid *Paralepidotus ornatus*, dealing mainly with ontogenesis and paleoenvironment. If done in time, it will be published in the proceedings of the Eichstätt symposium. As soon as possible (material is still under final preparation) also the detailed anatomical description and the generic relationships

will be prepared. A few new fish genera from the Norian are also on the way, as well as a description of *Birgeria* from both Norian and Carnian beds.

Silvio Renesto, after his work on *Megalanocosaurus* (now in press for the *JVP*) restudied the osteology of the odd diapsid *Drepanosaurus*. A new interpretation of the pattern of the shoulder girdle and a different hypothesis about the mode of life of the drepanosaur-like reptiles are suggested. This paper has been accepted by the *Zoological Journal of the Linnean Society*. Together with Rupert Wild, Silvio is now describing two new small prolecertiform reptiles. On the basis of a new, superb specimen of *Psephoderma alpinum* (nearly 2 m long), Silvio and Andrea are working on a new interpretation of the paleoecology and mode of life of this placodont. The preliminary results of their work were presented by Silvio at the VPCA Symposium at Cambridge last September. Finally, together with Anna Paganoni, curator of the Bergamo Museum of Natural History, an 80 cm long phytosaur skull will be described, as soon as the dorsal side is prepared.

The Ph.D. student Emanuela Zanalda is still working on a micromammal fauna of the Late Pleistocene from northeastern Italy. The collection of *Ursus spelaeus* specimens in two mountain caves of Lombardy, which had remained above the level reached by the glaciers, will provide new data on cave bear populations just before their extinction. Micromammals, pollen, and sedimentology are also being studied in and between the fossiliferous levels. A note on the presence of *Dynaromys* in western Lombardy is in press. (Andrea Tintori)

JAPAN

National Science Museum (Natural History Institute), Tokyo

Proceedings of one of the 29th IGC workshops Rodent families of Asian origins and diversification are still in progress and are planned to be completed by the end of March 1994 as one of our museum publications. Yuki, as one of the editors, apologizes for the delay to both contributors and those who are waiting to read them.

A couple of middle Eocene mammals have recently been found from Kyushu, Japan. One is a partial skeleton of a *Coryphodon*-like pantodont, and the other is a right jaw with M/2 3 of a *Kuanchuanius*-like tillodont. Both are the oldest known large mammals from Japan. Unfortunately the former is badly weathered and is under preparation. It will take quite a bit of time to be prepared. Both are under study by Yuki. After the IGC workshop is over, several additional small mammals have been found from the early Miocene of central Japan. Two of them are new from Japan: an *Amphilagus*-like ochotonid and a rodent somewhat similar to but too large to be *Ligerimys*. Both will be described by Yuki. He has also been quite busy with the museum and other duties including the preparation for the Japanese version of The Dinosaur World Tour by The

Ex Terra Foundation, which will be held in Osaka from June to September 1994. (Yuki Tomida)

MEXICO

Vertebrate Paleontology Laboratory, Centro INAH Aguascalientes

We are pleased to announce our first report of activities, because our prayers have finally been heard: we have been authorized to build up a VP lab at the Centro INAH (National Institute of Anthropology and History) in Aguascalientes State, in central Mexico literally from the ground up where we have a very small staff (only three people), all of us volunteers involved in the research, field work, preparation, cataloguing, and storage of fossil vertebrates from the central and western regions of Mexico. We are presently busy working in the remodeling and enlarging of the Oswald Mooser's Hall of Paleontology at the local Regional Museum of Anthropology and History, and we are planning the new exhibits, dealing with all the museographical tasks. It is good news to know that, in these times of worldwide budget cutoffs, VP is still alive in this small Mexican state, being noteworthy that this work is the main advance in our science since Drs. Mooser and Dalquest's joint work on the Cedazo and Zoyatal mammalian faunas from the Pleistocene and Miocene respectively. Two of us (Ruben Guzman and Manuel Rodriguez) are finishing the description of new material of the hyenoid dog *Osteoborus*, outs being the most complete cranial material of this genus collected in Mexico. They also presented three abstracts at the SOMEXPAL (Sociedad Mexicana de Paleontologia) National Congress held in Mexico City last October 20 to 22. R. Guzman and Oscar Acosta also won a local historical essay contest with a manuscript on the prehistory of Aguascalientes, and are also working hard to find funds for a project on wet-screening recovery of microvertebrates from the well-known Pleistocene localities of the Cedazo and San Francisco ravines, as suggested by Dr. Dalquest.

R. Guzman and the archaeologist Daniel Valencia submitted a paper entitled Paleontology of Aguascalientes: Bibliographic Review (in Spanish), to be soon published by the INAH.

We are looking for the loan of comparison material of the hyenoid canids (*Aelurodon*, *Osteoborus*, and *Borophagus*) to complete our research; so, if anyone could supply us with casts, we would appreciate very much if they would contact us.

Finally, we continue our explorations in the Miocene and Pleistocene localities of Jalisco, Aguascalientes, and Zacatecas states, and you will hear more from this project later. (R. Guzman)

UNITED KINGDOM

National Museums of Scotland (formerly Royal Scottish Museum), Edinburgh

It's a while since the last NMS entry in the *News Bulletin* and there is much to report. Most importantly, Mahala Andrews has unfortunately had to take early retirement from the Department of Geology on account of ill health, after a long and distinguished period of service here. She will still be working, as a visiting researcher, on Devonian onychodonts from Gogo, Australia, and on the local rhizodont crossopterygians. She has also just reviewed the Carboniferous adelogyrinid amphibians, together with Bob Carroll, in *Transactions of the Royal Society of Edinburgh Earth Sciences*.

On a happier note we are beginning 1994 well with the publication of the research program which has been underway at East Kirkton for several years. Volume 84, joint Parts 2 and 3, of the *Transactions of the Royal Society of Edinburgh Earth Sciences* reports the proceedings of the 1992 Edinburgh conference on Volcanism and Terrestrial Biotas which reviews the origin, sedimentology, mineralization, taphonomy, environment, and almost entirely terrestrial biota of the East Kirkton Viséan hot springs locality. Due out January 1994, it can be bought for [[sterling]]39 sterling from CABI, Wallingford, Oxfordshire OX10 8DE, England. Phone (0) 491 832111. It's all well worth reading not least for the surprising conclusion that hot springs may possibly not have been involved. Vertebrate paleontology papers specific to East Kirkton cover acanthodians and actinopterygians (M. Coates), elasmobranchs (R. L. Paton), anthracosaurs (D. Sumner), and the oldest known temnospondyls and anthracosaurs (A. R. Milner and S. E. K. Sequeira; T. R. Smithson; J. A. Clack) and almost the oldest Aïstopod (A. C. Milner) but not, perhaps, quite the oldest reptile : *Westlothiana* (also known as Lizzie) is not considered a stem reptile on the basis of further preparation of the holotype by William Lindsay plus data from a second specimen (T. R. Smithson, R. L. Carroll, A. L. Panchen, and S. M. Andrews). There are also overviews of the East Kirkton vertebrates' evolutionary and ecological significance by Bob Carroll and by Euan Clarkson, Andrew Milner, and Mike Coates, as well as comparative papers on the Hamilton (Stephanian, Kansas) Lagerstätte by H.-P. Schultze, C. G. Maples, and C. R. Cunningham, and the Niederhäslich Limestone of the Döhlen Basin, Germany, by J. Schneider. That's just the vertebrates, of course: the volume includes still more on stratigraphy, mineralization, paleobotany, arthropods, and so forth (would you believe an eurypterid with a head 62 cm across?). Publication is thus just ten years after Stan Wood first spotted some curious banded limestone when refereeing a football match. East Kirkton itself is a protected site and may well be opened to the public. We will keep you informed.

Among other changes, Mike Taylor has moved back home from Leicestershire Museums to become Curator of Vertebrate Paleontology in succession to Mahala Andrews. Apart from working with Glenn Storrs on English Rhaetian Hettangian plesiosaurs, and reviewing aspects of marine tetrapod functional anatomy, he is becoming increasingly interested in the Scottish Jurassic vertebrates. If you are interested in this fauna and wish to be put on the mailing list for the putative Scottish Jurassic Vertebrate Group, or if you or your collection have any vertebrate material from the Scottish Mesozoic, please fax Mike (direct on (0) 31 225 5811); he is anxious to trace all known specimens.

Bobbie Paton is investigating a newly acquired *Aspidorhynchus* from the Kimmeridgian of Eathie (north of Inverness) as well as a fine, if incomplete, amphibian from the Viséan of Gullane, on the coast east of Edinburgh. The other main vertebrate project here is the Upper Devonian tetrapod locality of Scaat Craig, south of Elgin. Bill Baird and Bob Reekie are working with Per Ahlberg (now Natural History Museum, London) to reopen the exposures of conglomerates and sandstones which contain interminable scales of *Holoptychius* and rarer remains of more interesting fish and Per's prototetrapod.

But it's not all research, of course. Apart from the usual curation, we are contributing some of the vertebrates to the displays of the new Museum of Scotland, opening in 1998. Visitors are as always welcome (remember that we have good collections of *non-Scottish* fossil fish, thanks to Ramsay Traquair's tenure here) but please check with us first as we are due to move our stored collections in the upcoming year, and a select few specimens will be earmarked for the Museum of Scotland.

For historical reasons, Andrew Kitchener, Curator of (Recent) Birds and Mammals in the Natural History Department, is also responsible for the fossil members of these groups, although Geology have now taken over the Mesozoic forms (such as they are). Andrew is still here, never fear, but he's currently preoccupied with problems of Recent carnivore taxonomy mainly the recognition of hybrids between the wild type and feral domestic breeds in for example *Felis*, *Canis*, and *Mustela putorius* (what we call a polecat/ferret) and with work on a new Bird Gallery, filled with a magnificent collection of taxidermy from Wandering Albatross and Lammergeier to *Archaeopteryx* (and a life-size *Dimorphodon* for contrast). He hopes, one day, to return to the horns of ceratopsians and their comparison with those of bovids. (Mike Taylor)

University Museum of Zoology, Cambridge

1993 has been a very productive year for us here. It started with the discovery of some wonderful 3-D specimens of the braincase of *Acanthostega*, to add to the list of goodies this material has produced. This has allowed a confident reconstruction of the braincase and occiput, so that we now have virtually the complete anatomy of this Devonian stem tetrapod. It has generated some ideas about the evolution of the stapes and fenestra ovalis which Jenny Clack presented briefly at the SVP meeting in Albuquerque. She and Mike Coates also were guests at a symposium in May to mark 100 years of the Geological Museum Copenhagen, where they presented some new anatomical restorations of *Acanthostega*, published in the accompanying volume.

Jenny and Mike organized the 41st Symposium of Vertebrate Palaeontology and Comparative Anatomy in Cambridge in September, a meeting which seems to have been enjoyed by all. Thereafter Jenny, on her sabbatical leave, was able to visit the States to take in the SVP meeting as well as the GSA meeting in Boston. Here she presented a critique of the idea of terrestrial Devonian tetrapods, pointing out that there is no unequivocal evidence for their existence, not even in trackways. She is off in late

December to the 2nd World Congress of Herpetology in Adelaide, to talk about the fenestra ovalis of *Acanthostega* again, and then to visit colleagues and institutions on that continent.

She has had a paper on the cranial material of the Devonian tetrapod *Tulerpeton*, with Oleg Lebedev, appear in *Palaeontology*; and has in press a description of one of the Visean anthracosaurs from East Kirkton (*Trans. R. Soc. Ed.*); a redescription of the palate of *Crassigyrinus* (*Special Papers in Palaeontology*); description of the snout, palate, and ventral parts of the braincase of *Acanthostega* (*Meddr om Gronland*); and the evolution of the middle ear (*Acta Biotheoretica*).

Mike and Jenny have nearly completed their work with the model-maker Eliot Goldfinger on a commission for a skeletal model and life restoration of *Acanthostega* for the AMNH's new fossil vertebrate galleries. This part of the gallery, however, is not due to open until 1996.

Mike Coates had a paper on Namurian actinopterygians including information on their otic capsules and relationships appear in *Palaeontology*, and has in press papers on the acanthodians and actinopt of East Kirkton, with a joint paper on the paleoecology of this site (*Trans. R. Soc. Ed.*). He has a paper on ancestors, homology, and the origin of limbs about to appear (*Acta Biotheoretica*), and is writing a paper for *BioEssays* on the evolution of the tetrapod limb. He has been invited to speak at a conference on the Evolution of Developmental Mechanisms in Edinburgh in 1994, and his thoughts on *Hox* genes, fin folds, and serial homology appeared in the Scientific Correspondence column of *Nature*.

His future projects include completing a paper on the limbs of *Tulerpeton* with Oleg Lebedev, including a first run of a PAUP analysis of very early tetrapods. This is nearing completion and should be submitted soon. Another project will be the description and consideration of the significance of a Carboniferous fish brain (yes, brain) found in a nodule specimen in the collections of the BMNH.

As for other members of the team, Paul Upchurch completed his thesis on the systematics and relationships of sauropod dinosaurs, and is now anticipating his viva. He obtained a fellowship at Sidney Sussex College to continue his work for another three years. Michael Lee had a paper published in *Science* with some controversial new views on the relationships of pareiasaurs and turtles. I am sure that the debate will continue! He is currently off on his travels again. After a long spell in Moscow in the summer he is now visiting Australia and South Africa to finish up his work on pareiasaur systematics. Elizabeth Pringle has taken a break from Visean anthracosaurs and has been looking again at those beasts currently known as *Gephyrostegus*. She is planning a visit to Prague next year to check some details. Watch this space.

Meanwhile, a former student of this institution, Per Ahlberg, has accepted the job of Senior Research Fellow at the Natural History Museum, London. (Jenny Clack)

UNITED STATES OF AMERICA

Northeast Region

American Museum of Natural History, New York

John Maisey has published a description of a new clupeomorph, *Santanaclupea silvasantosi*, from the Santana Formation of northeastern Brazil. It is more derived than *Spratticeps* (the only other Cretaceous clupeomorph known from cranial material). Its relationships among clupeiforms is uncertain, although its elongate jaws are engraulid-like.

John also published a biogeographical review of all fossils (including vertebrates, insects, and plants) from the Santana Formation in *Biological Relationships Between Africa and South America* (Yale University Press, 1993) edited by Peter Goldblatt. While most of the fossils are biogeographically uninformative, some are informative regarding Recent relatives (e.g., gars, gonorynchiforms, some ephemeropterans, and odonatanans), others are informative about now-extinct Gondwanan lineages (e.g., several fishes, crocodylians). Some of the records have unexpected biogeographical significance (especially among the insects).

In the summer, John attended the Mesozoic Fishes meeting in Eichstätt, then returned to Brazil for field work with Alex Kellner, and attended the Brazilian Paleontological Congress.

Last summer, Alexander Kellner was awarded the Bryan Patterson Award for field work in the Late Cretaceous strata of Minas Gerais (Brazil). Joined by John Maisey and Diógenes de Almeida Campos (DNPM, Rio de Janeiro), Alex worked on several localities digging out some nice specimens that are now being prepared. The preliminary results of this fieldwork will be presented during the next SVP meeting in Seattle. Alex also continues his research on pterosaurs, and will have some papers coming out very soon.

Jim Clark finished up his postdoctoral fellowship, completing a manuscript on the skull of the segnosaur *Erlikosaurus* with Perle Altangerel (Museum of Natural History, Ulan Bator) and Mark Norell, and segued back into work on the Jurassic microvertebrate site of Huizachal Canyon, Mexico. In the near future he will be visiting Vietnam with Ian Tattersall (Anthropology, AMNH) and Jeff Schwartz (University of Pittsburgh), returning to Huizachal Canyon with Dave Gastovsky (University of Rhode Island), Rene Hernandez, and Marisol Montellano (UNAM, Mexico), and cleaning up the Buffalo Mountain, Nevada, thalattosaur quarries with Hans Sues (Royal Ontario Museum, Toronto), Nick Hotton and Pete Kroehler (Smithsonian), and assorted Rommies.

The 1993 Mongolian Academy of Sciences-American Museum of Natural History expedition to the Gobi Desert of Mongolia was the most successful yet. The AMNH crew was composed of Mike Novacek, Malcolm and Priscilla McKenna, Mark Norell, Jim Clark, Amy Davidson, and Luis Chiappe. After a rewarding visit to Late Cretaceous deposits at Tugrugeen, the expedition discovered an extremely rich new Late Cretaceous fossil locality in the eastern part of the Nemegt Basin. The summer was finished off by a visit to the Oligocene locality of Tatal Gol, where Malcolm McKenna pieced the complex stratigraphy into a coherent picture. In December, Malcolm spent some time in Oslo, working with Zofia Kielan-Jaworowska on an unusual new Cretaceous skull collected by Lev Nessov (University of Saint Petersburg) in Uzbekistan.

Luis Chiappe has been working (together with Mark Norell, Jim Clark, and Perle Altangarel) primarily on the exciting *Mononykus olecranus*, of which some papers have been published and other ones are submitted or in preparation, and the description of several enantiornithine specimens from Argentina (American Museum Novitates, no. 3083). In January, Luis went to Spain in January where he was working on the redescription of the superb Lower Cretaceous birds *Concornis lacustris* (together with José L. Sanz and Angela Buscalioni, Univ. Autónoma, Madrid) and *Noguerornis gonzalezi* (together with Antonio Lacasa, Lleida). The paper on *C. lacustris* was finished in a second visit to Spain in November. Luis is grateful to them for their hospitality and their invitation to participate in such interesting studies.

Last winter and spring Luis was delighted to be visited by Zhou Zhonghe (IVPP, Beijing), Eugeny Kurochkin (Paleontological Institute, Moscow), Per Ericson (Swedish Museum of Natural History, Stockholm), James Lamb (University of Alabama), and Robert Chandler (University of Florida). Zhou and Eugeny brought interesting specimens from the Cretaceous of China and central Asia, respectively, as well as very insightful discussions. Per, James, and Luis started the description of a new enantiornithine (reported at the last SVP meeting) from the marine Mooreville Formation of Alabama found in 1992 during a field trip organized by Storrs Olson. Bob Chandler and Luis finished a report on the oldest (Lower Miocene, Patagonia, Argentina) known tinamous. Also, Luis coauthored with David Varricchio (Museum of the Rockies) the description of a new enantiornithine avisaurid from the Two Medicine Formation of Montana, and a study of the bone microstructure of the Cretaceous birds Enantiornithes and *Patagopteryx deferrarlisi* together with Anusuya Chinsamy and Peter Dodson (University of Pennsylvania).

Dan Bryant has continued his work on continental paleoclimate reconstruction using the oxygen isotope composition of fossil horse enamel.

Xiaoming Wang spent a pleasant April in the John Day Fossil Beds National Monument in Oregon and collaborated with Ted Fremd to work on the biostratigraphy of canids in the Turtle Cove Member of the John Day Formation. Preliminary results indicate marked difference in canid assemblages above and below the Picture Gorge Ignimbrite. In September October, he joined field parties from the IVPP, Nanjing Institute of Geography and Limnology, Gansu Provincial Museum, and colleagues from the U.S. to

work on the biostratigraphy and magnetostratigraphy of the Oligo Miocene Lanzhou Basin, Gansu Province, China. He thanks Larry Flynn (Peabody Museum) for the invitation to participate in this adventure. Xiaoming is putting final touches on this monograph on the phylogeny of hesperocyonines and his paper (with Richard Tedford) on the miacids primitive canid transition will be published in the *American Museum Novitates* by the time this news is in your hands.

In April Beth and Dick Tedford went to Australia to attend the CAVEPS'93 (Conference on Australasian Vertebrate Evolution, Paleontology, and Systematics) which now gathers every two years to hear a résumé of current work in VP in that part of the world. A symposium at this conference focused on the Pliocene/Pleistocene faunas as part of the centennial of the 1893 expedition to Lake Callabonna, South Australia, which produced the first reasonably complete skeletons of the larger late Pleistocene megafauna. Dick spoke at the opening of the Callabonna Centennial Exhibition of the South Australian Museum (organizers of the 1893 work and participants in the 1963 and 1970 work that Dick was also a part of). In addition he presented a synthesis of faunal change through the Pliocene and Pleistocene focused on southeastern Australia which has the most continuous record known to date. The conference papers are to be published by the South Australian Museum. Dick worked on Pleistocene faunas in the Australian and South Australian Museum's collections and enjoyed visits with family and friends.

In September and pre-SVP October, Beth and Dick and Steve Barghoorn returned to the northwestern Albuquerque Basin for further work, this time focused on the early Hemingfordian part of the Zia Formation where fossils are scarce, but especially welcomed in an effort to locate a lithostratigraphic signature for the four million year hiatus the fossil record demands.

Steve and Dick conducted the pre-SVP field trip to the Española Basin Neogene that was blessed with great weather and good company.

During the year we received visits from several colleagues from IVPP: Zhou Mingzhen, Ye Jie, Wang Banyue, Qi Tao, and Zhou Zhonghe from Beijing Natural History Museum, Guan Jian, and from the Institute of Geomechanics (retired) Yang Xinxiao conducting historical research on his father's (Yang Chungchen) correspondence with North American VPs. It is good to see a number of our Russian colleagues face-to-face after all these years: Andrei Sher (Moscow), Margarita Erbajeva (Siberia), and Pyruza Tieuberdina (Khazakstan). (Luis Chiappe)

Calvert Marine Museum, Solomons, Maryland

Mike Gottfried was very pleased to accept an invitation to become an adjunct faculty member at the University of Pennsylvania, as part of the Penn paleobiology group. This was promoted by Peter Dodson thanks! Sue Dawson, one of Peter's grad students, just defended her dissertation which includes fossil dolphins from the CMM collection. All of

us at CMM wish Sue good luck with her postdoc at Cornell and hope to see her down here again soon, and Mike is looking forward to a long and fruitful association between Penn and CMM.

Mike has remained busy with research projects on fossil and living white sharks and basking sharks, and with work on the new fossil hall. We recently completed the finishing touches on our 1/8th scale (5 ft long) skeletal reconstruction of *Carcharodon megalodon*, to be used as a model for building the full-sized (nearly 40 ft long) skeleton that will be in our new fossil exhibit. Progress continues on the hall itself, with most of the framing and other basic carpentry now finished, and the Calvert Cliffs replication well underway.

CMM recently welcomed Karen Peterson as our new Curator of Education. Karen had been a site director for the Hudson Valley Historic District, and before that was head of education programs at Plimouth Plantation. She fills the position vacated by Craig DeTample, who is now at the South Dakota Discovery Center and Aquarium in Pierre, South Dakota. (Mike Gottfried)

Jersey City, New Jersey

Paul Borodin, James J. Leggett, and Jerry Case continue collecting raw amber for the American Museum. Jerry is working on two fossil shark papers with Henri Cappetta of Montpellier, France. They are Upper Cretaceous faunas from Texas (Cenomanian all the way up to the Late Maastrichtian).

Jerry spent two weeks in Japan in September identifying shark species in the collections of the Kanagawa Prefectural Museum and the Geology Department of the Yokohama National University. Jerry spent some time with Drs. Goto and Uyeno (Yokohama and Tokyo) discussing fossil sharks. Jerry's hosts in Japan were Drs. Matsushima (Kanagawa Prefectural Museum) and Y. Hasegawa (Professor of Geology at the Yokohama National University).

Finally, Paul Borodin and Jerry Case attended the meetings (53rd) of the SVP held at Albuquerque, New Mexico, in late October. (Jerry Case)

New Jersey State Museum, Trenton

Bob Denton and Bob O'Neill expect their paper on Ellisdale teiid material to appear in the *JVP*, having just completed revisions. They will soon be excavating there once again, so we expect more new and exciting discoveries.

Bob Denton and Dave Parris have joined James Dobie (Auburn;) in the study of some Alabama *Hyposaurus* material. Now that this mesosuchian genus is appearing in Cretaceous and Paleocene sediments of the Gulf region, they would like to hear from anyone who has other specimens from eastern North America.

Princeton undergraduate Michael Mills and Monmouth County student Evelinn Nieb are working with Dave on biostratigraphy of the Pleistocene mammals of Monmouth brook deposits. Joe and Sandy Camburn found an elephant rib there last year for which we got a ¹⁴C date of 12,470 +/- 260 BP (courtesy of a grant from the Archaeological Society of New Jersey) which gives us a good radiometric age reference. (David Parris)

Peabody Museum, Yale University, New Haven, Connecticut

Economic reality has hit Connecticut, as everywhere else, almost as hard as it has hit California. Yale has felt the impact and Peabody Museum is no exception suffering the loss of several positions during the last two years. With the loss of Bob Allen this past January, the situation has hit where it hurts. Bob has been the Division's sole preparator for the last 12 years. Many of you know him as the primary fabricator of our spectacular *Deinonychus* free mounts in the Great Hall. Now, with the Peabody forced to make a pragmatic shift toward specimen and data conservation and storage, and away from extravagant public exhibits, Bob's talents became expendable unfortunately. Our loss. We wish him well in his new endeavors, and thank him for his mark that he leaves behind. Our gain. Please note that any requests for casts, etc., will have to be put on hold indefinitely.

With the enforced new commitment to continue efforts focusing on data storage and specimen housing and conservation, Mary Ann and Chris are devoting maximum efforts to those ends. That is evident to all here, but to you readers beyond Peabody's walls, it will be most evident in loan correspondence returns, permissions, whereabouts, etc. All this is in accordance with Peabody's new loan policy currently being finalized with the assistance of Yale's legal council. On that note, please note the revised mail address. It is changed to: Yale University, Peabody Museum of Natural History, P. O. Box 208118, 170 Whitney Avenue, New Haven, CT 06520-8118. This address applies to everyone connected with the museum. U. S. Postal workers apparently have been unable to recognize our zip code, so please use the above mailing address noting the Division of Vertebrate Paleontology, if appropriate.

Apparently, the word got around at the October SVP meetings but this is the official announcement of John Ostrom's retirement. He actually gave his decision to Yale last August 30th, but because of his commitment to teach a special course on fossil Lagerstätten with Dolf Seilacher during the fall term, John stayed on in charge of Yale's VP lab until the end of the year. He is quick to emphasize that he is not retiring from SVP and plans to be at the 1994 SVP and GSA meetings in Seattle. In fact, he has committed

himself to participate in the Paleontological Society's Short Course Major Features of Vertebrate Evolution organized by Don Prothero and Rob Schock.

John leaves the collections and labs at Yale in the very capable hands of Mary Ann Turner who most of you know. Correspondence regarding collection matters should be addressed to her as collection manager (please note the new Yale P. O. Box number). Since John will still be working out of his office on a steady basis, correspondence to him should still be addressed as before but with the new P. O. and zip numbers. He still has a number of projects to finish and several pet projects he's impatient to start. He says the new agenda looks great.

John's *important* news for this *Bulletin* is by way of explaining his absence from the SVP meetings in Albuquerque. As much as he wanted to see old friends there, he opted instead to join the celebration of the 150th anniversary of the Paleontologic Museum in Munich, Germany, that very same week. As many SVPers probably don't know, the bond between the Yale Peabody Museum and the Bayerische Staatssammlung go way back into the 1860s. O. C. Marsh and Karl von Zittel were correspondents, and good friends as well as world-leader paleontologic contemporaries. It was essential to maintain those close ties, and John as the Official Delegate from Yale presented an anniversary plaque from Peabody to Bayerische Museum Director Professor Dr. Dietrich Herm and our colleague, head curator Peter Wellnhofer. It was a very high occasion attended by a large congregation of state and university officials, many fellow paleontologists from across Europe, and Friends of the Institute. It was good to be part of that historic celebration. (Gerry Parisi)

The State Museum of Pennsylvania, Harrisburg

Bob Sullivan spent the earlier part of October collecting fossil vertebrates from the Late Triassic Chinle Group exposure adjacent to, and south of, Ghost Ranch, New Mexico. Bob was successful in recovering a number of topotypic specimens referable to *Coelophysis bauri* from the Petrified Forest Formation (=Member) which should lay to rest the prevailing notion that the Baldwin type material could have only originated from the Ghost Ranch (Whitaker) quarry! Bob is currently working on this material and hopes to publish a paper describing these important topotypic specimens.

After attending the SVP meeting and the Nonmarine Triassic Symposium in Albuquerque, Bob returned to Harrisburg for the opening of the State Museum's Dino Lab exhibit. Alex Downs (of Smithsonian and Ghost Ranch fame) was contracted for a three-week period to initiate preparation of our Ghost Ranch block and to train our Dino Lab volunteers in the finer art of vertebrate fossil preparation. A special preview of Dino Lab was sponsored by members of the Friends of the State Museum on October 30th. He also participated in a media event for the museum's Dino Lab and taped a Desert Island Discs program for our local PBS affiliate (WITF) which will air in early 1994. All of us

here at the State Museum thank Bob for his excellent programs and unrelenting support of our museum and its programs.

Sheri Bromer joined the paleontology and geology section in November as a seasonal (temporary) employee and has been given the tasks of helping in the curation of fossil specimens and the coordination of Dino Lab volunteers. We are fortunate to have a number of Dino Lab volunteers. They are: Karen Boner, Kelly Bower, Kevin Dermody, John Drotar, Kristie Guldin, Kimberly Kehew, David Kline, Marty Missley, Tony Pickter, Kesler Randall, Kim Sebestyen, and Jamie Wolf. Consequently Dino Lab is fully staffed, so there is a technician present (most times) during visiting hours.

In November, Bill Kochanov and Jim Shaulis (both of the Pennsylvania Geological Survey) teamed up with Bob to collect a *Bothriolepis* site in the Catskill Formation of southwestern Pennsylvania. Two layers of nearly impenetrable armor-plated mesh proved to be a formidable challenge. Some specimens were recovered but the rest were left behind for another time. In December, Bill and Bob surveyed a site of dinosaur tracks (*Atreipus milfordensis*) in the Lockatong Formation of southeastern Pennsylvania. Plans are to collect these footprints sometime this winter (weather permitting). In the meantime, Bob continues to plug away on various research projects cited in October's (1993) edition of the *SVP Bulletin*. (Bob Sullivan)

State University of New York at Stony Brook

This past summer, Dave Krause was joined by colleagues Joe Hartman and Neil Wells and by graduate students Crag Buckley, Charles Lockwood, Augustin Rabarison, Laurent Randriamiamanana, Chris Wall, and Roshna Wunderlich in an attempt to find Late Cretaceous mammals in Madagascar. In addition to finding several significant new records of lower vertebrates and the first freshwater invertebrates in Upper Cretaceous strata in Madagascar, a fragmentary mammalian cheektooth was discovered. A preliminary note on this discovery has been accepted by *Nature*. There is great hope that additional specimens of mammals will be discovered in the screen-washed concentrate this winter. There is also hope (NSF willing) to return to Madagascar next summer, this time with dinosaur expert Peter Dodson as well. Since our last contribution to the *News Bulletin*, Dave reports that a number of papers have been published: a consideration of the systematics and diversity of South American gondwanatheroid multituberculates (with J. Bonaparte *Proc. Nat. Acad. Sci.*), a road log and overview of recent investigations of Paleocene strata in the Crazy Mountains Basin (with J. Hartman *Montana Geol. Soc. Guidebook*), and a description of the endocranial cast of *Ptilodus* (with Z. Kielan-Jaworowska *Paleovertebrata*). Two papers with Mary Maas on mammalian faunal turnover in the Paleocene of North America are still in press (*Hist. Biol.* and *Palaeo*³). Included among current projects are a description of a new Paleocene local fauna from North Dakota (with A. Kihm and J. Hartman), an analysis of dental function in plagiulacoid multituberculates (with Z. Kielan-Jaworowska), and a description of the premaxilla of *Majungasaurus* (with P. Dodson). (Dave Krause)

United States Geological Survey, National Center, Reston, Virginia

While the Pliocene ostracod exile drags on at the USGS, Tom Holtz finds some release this spring in teaching a course on dinosaurs for nonscience students at the University of Maryland, College Park campus. New research projects for Tom include a paper on patterns of extinction among Campanian Maastrichtian Ornithischia and claw-and-tooth morphology among predaceous terrestrial amniotes. He is also writing a short chapter on dinosaur hunters in the southern continents for Farlow and Brett-Surman's new popular-audience dinosaur text. Ron Litwin and Rob Weems continue research on the Culpepper, Virginia, vertebrate tracksite. Ron is also doing some groundbreaking analyses of Morrison Formation palynological assemblages from vertebrate localities in Colorado, Montana, and Wyoming. (Tom Holtz)

Southeast Region

Columbus College, Columbus, Georgia

David Schwimmer and Dent Williams are currently working on the usual assorted southeastern Upper Cretaceous projects. Our paper on Late Cretaceous dinosaurs from the Blufftown Formation (Campanian) in western Georgia and eastern Alabama appeared in the *Journal of Paleontology*, 67(2):288-296. At SVP in Albuquerque we presented a report on giant Cretaceous crocodiles, based in large part on a skull reconstruction from the Mooreville Formation in central Alabama. We believe it is an immature or female individual of the species commonly assigned to *Deinosuchus rugosus* (but which we argue is not generically *Deinosuchus* because the associated osteoderms are atypical). The Mooreville Formation specimen was about 7.5 m long by our estimate, but we have teeth and bones from similar crocodiles at least one-third larger.

We submitted a manuscript on Late Cretaceous giant coelacanths from the eastern United States to *Geology*, coauthored with J. D. Stewart. We now have specimens of this fish from western Georgia and New Jersey, as well as abundant material from western, central, and eastern Alabama. Earl Manning informed us that he also has some similar material in Mississippi; this big fish was clearly common; you too may have little pieces of a Cretaceous giant coelacanth in your scrap bone pile.

Work continues on several projects. Dent and Patsy Dudley continue compiling an inventory of Late Cretaceous marine vertebrate taxa in eastern Alabama, which grows constantly larger and includes material from new localities in Russell and Bullock counties. David is continuing work on scavenging by several species of the selachian *Squalicorax*, and the taxonomy and distribution of the eastern Cretaceous teleost *Xiphactinus angulatus*. A distal tibial fragment from a Hesperornithiforme bird was collected in the Blufftown Formation in Georgia, and David and James Lamb will

describe the occurrence in a forthcoming note as far as we know, this is the first eastern North American occurrence of these birds. (David Schwimmer)

LSU Museum of Natural Science

Several trips out to our new Miocene site in western Louisiana have been productive both of medium and large vertebrates and of rodents recovered through acid treatment and screening. Suyin Ting has located several additional productive levels. Schiebout is preparing some preliminary papers on the site. If grant funding becomes available we should both need and be able to support some additional students. Contact Schiebout for more data.

Schiebout is working on modifying the LSU Museum of Natural Science computerization system for use on our vertebrate paleontological collections and reorganizing those collections. She expects regular data entry by students to begin in early spring.

Suyin Ting has been working since spring on her dissertation materials from an early Eocene site at Hengdong, Hunan Province, China. Alton (Butch) Dooley is working on squalodonts for his dissertation and would greatly appreciate news of any specimens about which he may not have heard. He has several papers on Miocene whales underway.

Any reprints on isotope work near the Paleocene/Eocene boundary or Barstovian vertebrates sent to Schiebout would be appreciated. Barbara Standhardt currently lives at H.C. 70, Box 473, Terlingua, TX 79852, and is interested in scientific illustration work and in receiving reprints on Cretaceous and Paleocene mammals.

All here enjoyed entertaining Drs. Minchen Chow from IVPP and J. Keith Rigby, Jr., from Notre Dame this fall. (Judith Schiebout)

Department of Biological Sciences, Murray State University, Murray, Kentucky

This is the first communication from Murray State University, where a Quaternary research lab should be operational by the beginning of the spring semester. I look forward to applications from aspiring M.S. students interested in working with morphological change, paleoecology, or the evolution of mammalian communities during the late Pliocene and Pleistocene. Write c/o Department of Biological Sciences, Murray State University, Murray, KY 42071.

In addition to papers in the recently published *Morphological Change in Quaternary Mammals of North America* volume from Cambridge, one summarizing cotton rat evolution in the southwestern U.S. appeared in *Ashes, Faults, and Basins from the San*

Bernardino County ;Museum, and another titled A new species of *Microtus* (*Pedomys*) from the southern United States, with comments on the taxonomy and early evolution of *Pedomys* and *Pitymys* in North America has been accepted by JVP. (Robert A. Martin)

The University of Florida, Gainesville

Just before the SVP meetings Dave Webb enjoyed visiting Russ and Mary Ann Graham and many of their colleagues at the Illinois State Museum where we all had one more fling with FAUNMAP, the computerized mapping system for Pleistocene mammals (David reports that FAUNMAP is lots more fun than Nintendo!). During most of October Dave and the underwater paleontology group excavated more of level 23 in the Aucilla River. Besides bones and limestone clastics, the principle component of the sediments at this level is *Mammut* dung. The largest of the many interesting bones recovered during this year was a 21/2 m-long tusk with cut marks just distal to the alveolar margin.

Bob Chandler reports that the first humerus and several fragments of beak of *Titanis walleri* (Phorusrhacidae) were found this fall in the Santa Fe River. He is still waiting for dredge equipment to really do some work on the project. Bob has received a Visiting Scholar award to travel to the Field Museum to study phorusrhacids sometime this spring. Also, Bob and Oscar Carranza Castaneda (UNAM) are writing a paper describing the fossil birds from a Blancan locality in Mexico that Oscar has been working for several years. The most interesting record is that of *Teratornis* cf. *T. incredibilis*. And finally, Richard Stucky (DMNH) has asked Bob to study an almost complete skeleton of a bird recently collected from Florissant, Colorado. The bird is a new genus and species of small owl.

David Lambert has finished the written portion of his Ph.D. dissertation, and is frantically making plates and figures. He hopes to defend in late February. With finishing imminent, David is continuing to search for a job for the next academic year. He attended the SVP meetings at Albuquerque, and gave a talk coauthored by Crawford Holling of the University of Florida on the paleoecological implications of body mass distributions in late Rancholabrean and Recent mammal faunas (the paper associated with this talk is largely finished, and should soon be submitted to *Ecology*). Dave hopes to apply the methodology used in the aforementioned study to an examination of the changing diversity pattern of terrestrial mammals in the late Miocene savannas of North America, and in conjunction with Dave Webb and Crawford Holling submitted a NSF grant proposal to fund such a postdoctoral study.

On a final but important note, Gary Morgan has returned to the Florida Museum from his sabbatical at the New Mexico State Museum, resuming his responsibilities as fossil vertebrate collection manager. In addition, Gary in conjunction with Dave Webb and Richard Hulbert has been doing last minute editing of the long-awaited Leisey volume, to be published in the *Bulletin of the Florida Museum of Natural History*. Gary says it should finally be out by the middle of 1994. (W. David Lambert)

Midwest Region

Cranbrook Institute of Science

Daniel E. Appelman recently joined Cranbrook Institute of Science as Director. He was Associate Director for Research and Curation at the National Museum of Natural History, Smithsonian Institution. He is eagerly pursuing science programs which will involve extinct and extant taxa and the addition of a new wing to the museum. Carole DeFord was recently hired as a full-time collection manager for all ten ologies which include paleontological and archaeological specimens. She recently joined the Society of Vertebrate Paleontology but is currently preoccupied with the Native American Grave Protection and Repatriation Act for archaeological items for funarary, sacred, and ceremonial objects. Could this be in the future for paleo?

J. Shoshani and C. P. Groves organized a symposium Biology of the Forest Elephants as part of the 6th International Theriological Congress, Sydney, Australia, 4 10 July 1993. This symposium included papers on living and extinct *Loxodonta* ; we are searching for a publisher for an edited issue/volume. Following his Australian visit, J. Shoshani spent two months in China at the invitation of Jian Guan of the Beijing Natural History Museum (BNHM), helping with an exhibit on Proboscidea. Guan and Shoshani travelled to Lanzhou (Gansu Province) with a team from the BNHM to make casts of most of a skeleton of *Stegodon huanghoensis*, and then visited a Miocene site near Tongxin (Ningxia Hui Autonomous Region) for possible systematic excavation, a project which has been approved by Earthwatch.

At last, the volume *The Proboscidea: Evolution and Paleoecology of Elephants and Their Relatives*, edited by J. Shoshani and P. Tassy, is in galley form and will soon be published by Oxford University Press. Larry Agenbroad, Hezy Shoshani, and other colleague(s) are updating the distribution of mammoths (*Mammuthus* sp.) and American mastodons (*Mammut americanum*) in the New World. Readers who know of recent findings of these taxa in North America and Mexico, please let us know about them soon. Thank you. (Hezy Shoshani and Carole DeFord)

A quick hand reference for identification of cheek teeth of certain proboscideans has been developed and tested by Hezy Shoshani since 1987. Initially, this technique was developed for the length of the occlusal surface of teeth of the American mastodon (*Mammut americanum*); since then, it has been tested on teeth of early gomphotheres. The way it works is: the distal phalanx of your thumb is approximately the length of dp2 it applies for upper and lower teeth; the proximal phalanx of your thumb matches the length of dp3; the combined length of proximal and distal phalanges of your thumb matches dp4; the length of your index finger matches the length of M1; the distance from the tip of the index finger to the base of the thumb is approximately the length of M2; the distance from the tip of the third digit to the wrist is approximately the length of M3. Try

this handy tool a few times, and see how easy the system works; you no longer have to measure these teeth for quick identification. (Hezy Shoshani)

***Energy and Environmental Research Center, University of North Dakota, and
Department of Earth Science, Minot State University***

On June 19 and 20, 1993, the Pioneer Trails Regional Museum sponsored the Marshall Lambert Symposium in Bowman, North Dakota. The two-day event honored Marshall E. Lambert for his 40 years of dedication to a variety of paleontological and geological interests in the greater Ekalaka area of southeastern Montana. The symposium included a day of presentations on vertebrate, invertebrate, and geological topics. At the evening banquet, Marshall was presented a resolution and plaque from the Society of Vertebrate Paleontology recognizing a lifetime of achievement in the discovery of Late Cretaceous and Paleocene vertebrates, his significant contribution to the development and construction of the Carter County Museum, and his commitment, by example and through education, to instill respect for fossil vertebrates in hosts of visitors to the museum. A symposium field trip was conducted the following day and concerned the Upper Cretaceous and lower Tertiary geology and paleontology of extreme southwestern North Dakota. All events witnessed strong local and professional interest, with over 100 people attending.

Contributors to the symposium included F. D. Holland, Jr., (First aid to dinosaurs from Marshall Lambert), Brian J. Witzke and Raymond R. Anderson (The terminal Cretaceous Manson impact structure of Iowa and its possible influence on K/T events in the Western Interior), Barbara D. Wehrfritz (Silcrete: A distinctive rock type related to K/T boundary events), Edward S. Belt, Tekla Harms, Edward C. Beutner, W. Coppinger, and John A. Diemer (Some implications of changes in paleodrainage directions below and above an unconformity within the Paleocene Tongue River sandstones, near Ekalaka, southeastern Montana), Edward C. Murphy, John W. Hoganson, and Nels F. Forsman (The stratigraphy and paleontology of the Chadron, Brule, and Arikaree formations in North Dakota), Kirk R. Johnson (The Late Cretaceous [Maastrichtian] flora of the Hell Creek Formation in southwestern North Dakota), Joseph H. Hartman (An unusual occurrence of Paleocene nonmarine mollusks on the east flank of the Cedar Creek Anticline, Fallon County, Montana), Kenneth Carpenter (Did pachycephalosaurs [Ornithischia: Dinosauria] really butt heads?), Dean A. Pearson (The Medicine Pole Hills Local Fauna The first diverse Chadronian [latest Eocene]-age fauna from North Dakota), and Allen J. Kihm (Late Paleocene mammalian biochronology of the Fort Union Group, North Dakota: *Plesiadapis* [Plesiadapiformes] from the Brishane, Judson, and Wannagan Creek Quarry Local Faunas). Copies of the symposium and field trip papers are available from the North Dakota Geological Society, P. O. Box 82, Bismarck, ND 58502-0082, or the Pioneer Trails Regional Museum, 100 East Second Street, Bowman, ND 58623. (Joseph Hartman and Allen Kihm)

Fort Hays State University

Since our last report Barbara Beasley, Bruce Schumacher, and David Wilcots defended their theses on birds from a rockshelter in Utah, biostratigraphy of mosasaurs in the Niobrara chalk, and *Aphelops*, respectively. Kenshu Shimada continues work on various Cretaceous shark projects. He has presented posters at SVP, GSA, Kansas Academy of Sciences, and is planning a report for the 4th International Congress of Vertebrate Morphology this summer. He is also busy curating our shark collection. Greg Liggett continues work on his Miocene site in Clark County. He also presented a poster on his work at the SVP meetings. Michelle David has decided to work on our *Dolichorhynchops* skeleton for a thesis and Michelle Darneel will be looking at the horses from the Minium Quarry for her thesis. Rob Richards and Jon Wilson have joined us this fall as new graduate students. Both have an interest in lower vertebrates.

Work has begun on the new physical sciences building and architectural plans for the remodelling of the new home for the museum are almost finished. We hope to be in both facilities by the fall of '95. (Rick Zakrzewski)

Illinois State Museum

Russ Graham really enjoyed participating in the Time-Averaging Shortcourse at GSA which was organized by Kay Behrensmeyer and Susan Kidwell. Russ left Boston almost immediately to go to Boulder to contribute to a Global Warming workshop organized by Steve Schneider (INCAR and Stanford University). This workshop was composed of an eclectic group of climate modelers, ecologists, wildlife biologists, foresters, economists, and social scientists. Russ is glad to report that there were three paleo papers which addressed the needs for paleo data in order to understand future changes. While in Boulder, Russ had a brief visit with Judith Harris, Peter Robinson, and students. They graciously allowed him to measure black bears after he made a presentation on his research unfortunately the time was too short.

Russ, Jim Farlow (IUPU-Fort Wayne), and Jim Vandike (Missouri Geological Survey) have been working on a manuscript on Pleistocene lion cat tracks from a cave in Missouri. The tracks were found several years ago by Jim Vandike. Jim Farlow has digitized casts of the tracks as well as casts of other Pleistocene cat tracks and those of modern cats. In fact, Jim Farlow, Mary Ann Graham, Julie Snider, and John Keltner spent an interesting day at the Indianapolis Zoo with lions and tigers breathing down their necks as they cast tracks of these large cats. I was also told that Jim was seen leaving Indianapolis on a cold day with all of his car windows down. It appears that the plaster is also very good in preserving the scent of cat urine which permeated the sediments in the cat enclosures!

Rick Toomey has been busy working on the microfossils from Heinze Cave. He reports seeing triangles in his dreams. Rick and Russ received some interesting radiocarbon dates

from Tom Stafford (INSTAAR) which indicate that several of their cave faunas may be older than 40,000 years. This was somewhat anticipated for some sites, but for others, like Cherokee Cave (Simpson's *Bones in the Brewery*), we were simply shocked! This has raised questions about the ages of other cave faunas, e.g., Crankshaft Pit and Brynjulfson caves, which have been assumed, at least by Russ, to be late Wisconsin (less than 20,000 years old). Tom has also dated several extinct taxa from Illinois and Missouri which will provide more valuable data for the times of late Pleistocene extinctions.

Rick Toomey and Erich Schroeder have been working with Ernie Lundelius and Russ on statistical analyses of the FAUNMAP database. With Erich's very able GIS skills, we have produced exciting maps documenting changes in late Quaternary mammal communities. We are now preparing a manuscript on this research. Mary Ann and Erich have been working on another FAUNMAP publication which will contain maps showing changes in the geographic distributions of ca 150 individual species for different time intervals throughout the last 40,000 years. It will also contain the entire bibliography (more than 2,500 references) and other cross-referenced information. In addition, a computer disk will be enclosed with the entire database. Publication by the Illinois State Museum is anticipated this summer. Russ will have a computer demonstration of the database at the AMQUA meetings in Minneapolis in mid-June.

Russ and Holmes Semken (University of Iowa) are working on a manuscript for the Kowalski Symposium which will be held in Krakow in May. This paper focuses on taphonomic biases in archaeological and paleontological mammalian faunas. Yes, Virginia, there may be some problems! (Russ Graham)

Michigan State University

The long-awaited review article on Michigan Pleistocene proboscideans by Laura Abraczkinskas recently appeared in the *Michigan Academician*, vol. 25, 1993. Additionally, Laura will deliver a paper on the relationship of Michigan Pleistocene proboscideans to surficial salt deposits at the forthcoming Michigan Academy Meeting in March 1994. This presentation represents the second part of her masters' thesis, defended in 1992.

Research Associate Jerry Case spent three weeks in Japan in September where he engaged in curating a collection of Paleozoic sharks. Jerry writes that he is preparing publications on the Redbank Formation, WKA, and Russian sharks with Paul Borodin, and that he is awaiting final decisions on three monographs that are in press in Germany, two of which are on the sharks and bony fishes of the Paleogene of Mississippi.

Carl Doney did field work in Nebraska this past summer on a large herpetofauna near the base of the Arikaree Group in northwestern Nebraska and also looked at other Tertiary herpetological sites in the region. Carl's doctoral dissertation will deal with the study of Arikareean herpetofaunas of the midcontinental region.

Ken Ford supervised volunteers from Ohio and MSU students in the field this summer in the collection of vertebrate fossils for the Sheriden Pit (Indian Trail Caverns) site in northwestern Ohio. Ken's doctoral dissertation will deal with aspects of the vertebrate fauna of this rich site. Al Holman is now in the process of identifying the herpetological remains from the Sheriden Pit. Thus far, 14 taxa have been identified, including a very large Blanding's turtle (*Emydoidea blandingii*). Will this turtle rival the large southeastern and southwestern Pleistocene box turtle (*Terrapene carolina putnami*) in size? The Sheriden Pit has already produced the richest Pleistocene herpetofauna known in the Great Lakes Basin.

Shawn Clouthier and Al Holman are studying the excellently preserved Pleistocene turtles of the East Milford Site near Halifax, Nova Scotia. This site has also yielded mastodonts and frogs. Shawn is progressing well in his masters' thesis stable isotopic study of Tertiary horse teeth and has recently visited the AMNH where he acquired additional material for the project. Horse material sent for study from the University of Nebraska State Museum is also appreciated.

Al Holman has completed the first draft of his manuscript for a book for the Oxford University Press entitled Pleistocene Amphibians and Reptiles in North America. If you have new records of North American Pleistocene herps, please send them to Al for inclusion in his book. Holman visited the Barnham Pit and Beeches Pit middle Pleistocene sites in Suffolk, England, last June, courtesy of Nick Ashton and Simon Parfitt. This site is potentially the richest Pleistocene herp site in England and Al is busily studying fossils already acquired. Next summer will be the last field season at this important site. Holman has also completed the manuscript for a book for the University of Michigan Press entitled Ancient Life of the Great Lake Basin: Precambrian to Pleistocene. The illustrations for the book are in the final process of assembly.

We are very pleased to have Rachael Walker here this year via Oxford University and Mike Benton's lab in Bristol. Rachael is especially interested in sieving techniques and how they apply to the collection of microvertebrate fossils. She will be pursuing a Ph.D. in Tertiary paleoherpetology, but has not yet settled on a specific problem.

John-Paul Zonneveld admirably defended his masters' thesis on the Wasatchian Bridgerian Land Mammal Age Boundary (early to middle Eocene) in the Desertion Point-Little Muddy area of the southwestern Green River Basin. J-P had a particularly productive field season in this part of the world last summer, leading to the completion of this very thorough thesis. (Al Holman)

Department of Biological Sciences, Northern Illinois University

We realized, with some embarrassment, that we have not submitted anything to the *News Bulletin* since MP arrived here in 1988. Mike Parrish has been continuing the seemingly endless process of publishing the results of his phylogenetic analyses on the early

archosauriforms. A multi-author paper on the laterosphenoids of proterosuchids and erythrosuchids was just published, and papers on crocodylotarsan and aetosaur phylogeny are in press at JVP. Oscar Alcober and MP are working on a manuscript describing a large poposaurid from the Ischigualasto, and Mike also is wrapping up a survey of archosauriform braincase morphology. Lately, Parrish has been using various morphometric techniques to tackle the problem of cranial homoplasy in carnivorous archosauriforms. Other Triassic projects include analyses of global tetrapod distributions during the Permian/Triassic and (with Fred Ziegler and a cast of thousands) of floral community evolution during the Mesozoic (particularly the Triassic). He also continues to work on the Cretaceous dinosaur record from central Utah (with Jeff Eaton), and is continuing studies on the Chinle faunas of Utah, Arizona, and Colorado. Work with Steve Nadler on extracting mtDNA samples from an Indiana mammoth after solving some tricky problems with Recent contaminants. Results on Mesozoic bones have been less successful to date, but tests continue.

Ginny Naples writes I have not abandoned my interest in the study of sloth crania (of both living and extinct genera) but most recently have been investigating the manner in which xenarthran anteaters open and close the mouth and extend and retract the tongue. The mandible is not depressed so much as it is rotated to create a space large enough to permit tongue protrusion, in a fashion similar to that seen in echnidas. Other ongoing projects include an investigation of the range of movement of sloth limbs, based upon the natural climbing movements of tree sloths, and a study of dental and cranial structure of *Eremotherium*. On a completely different topic, I request assistance in locating copies of films I could analyze to test some hypotheses I have developed concerning tail fin function in swimming coelacanths. I am certain there is more going on than I have been able to understand from the literature.

Our department has an active graduate program in evolution and ecology, with both MS and PhD programs available. Either of us would be happy to talk with any student interested in pursuing graduate studies in vertebrate paleontology, functional morphology, or related disciplines. (Mike Parrish, Ginny Naples)

South Dakota School of Mines and Technology

The past year has been most eventful. Jim Martin was on sabbatical leave. On the first of August, Jim returned from the Bureau of Land Management in Prineville, Oregon. During that time he wrote a manual for paleontological resource management for the Washington and Oregon district of the BLM. That document is under review. He will return to Prineville in April and May to respond to reviewers' comments. He did have time to spend in Fossil Lake with continuing volunteer help from Wayne and Bess Harrold. Jim also reports that GPS is an invaluable aid in such featureless terrain.

The Museum is the beneficiary of an endowed postdoctoral fellowship, the Haslem Fund. We are most fortunate to have Gordon Bell, most recently from University of

Texas-Austin, as the first recipient. Gordon and wife Patti joined the Museum just before Christmas last year. The weather lived up to their expectations about a foot of snow and temperatures well below zero. Gordon has immersed himself in an explosion of South Dakota mosasaurs. We are very happy to have him on board.

A beautiful cool, wet summer brought several rewarding field efforts, some planned and some serendipitous. Gordon and Dan Varner led the continuing effort on the vertebrate biostratigraphy of the Upper Cretaceous south of the Black Hills. The effort is a joint project with the Buffalo Gap National Grassland and the Museum of Geology. In spite of the rain, they had a very successful season. Bruce Schumacher, a Ph.D. student in geology, is working closely with this effort and will concentrate on the South Dakota version of the Niobrara. In his spare time he found a plesiosaur in concretions in Rapid City!

Bill Schurmann took early retirement from Oryx Energy Company and moved back to Rapid City. He has become a regular volunteer in the field and in the lab. In order to find space for him, we remodeled a storage room. Bill, Wayne Brewster, Marilyn Dahm, and Walt Dennison are making a great contribution to Janet Whitmore's excellent preparation and curation efforts.

The annual Dave Parris and Jim Martin Two weeks along the Missouri River was extremely fruitful. A partial *Archelon*, a very young *Mosasaurus*, and a skull of *Mosasaurus dekayi* ? are the principal finds. Next summer will also bring the return of the Greensanders which is the highlight of our field season. Several mosasaurs anxiously await their careful attention.

John Foster (aka Sundance Kid) returned to sauropod quarry west of Sundance, Wyoming, for more than four weeks of labor. For two weeks he was joined by a group of volunteers from the University of Illinois Museum of Natural History led by Russ Jacobsen and Steve Soroka. John reports more sauropod, of course, an *Othnielia* femur, and two mammal jaws. All of a sudden, scale and preparation time take on new meaning for John at this locality. We will have a crew there next summer.

Kim Stevens spent the past summer as a paleo intern at Badlands National Park. All her plans for the summer were turned upside down with the discovery of a roadside bone bed (Pig Wallow) in the lower Scenic Member. The accumulation is dominated by *Archaeotherium* and *Subhyracodon*. Armed with a Total Station surveying instrument, she tries to unravel the taphonomy of the site for her M.S. thesis problem. The Park Service has been a very accommodating host for this venture which may last more than the next field season.

Dan Varner has moved his easel from Minneapolis to Rapid City. He will pursue the reconstruction of marine reptiles and continue to assist in various Museum field projects. (James Martin and Philip Bjork)

University of Chicago

As of this writing, Paul Sereno and his crew have completed field work in the Lower Cretaceous of Niger and have left the African continent for France. Several of the local members of the Niger expedition Cathy Forster, Carol Abraczinskas, Rick Blob, and Matt Carrano flew back earlier.

Cathy Forster, back from Africa, reports spending time there studying gecko (mis)behavior with Hans-Dieter Sues, shaving sauropods into the back of Hans Larsson's head, and investigating the ethylated beverages of Niger with everyone else. She is also planning, along with Rick Blob, to usurp some of Romer Prize winner Ray Rogers' glory with a joint study of vertebrates from microsites in Ray's Judith River section in Montana. Meanwhile, she is happily writing manuscripts, teaching anatomy, and looking for a job.

Rick Blob and Matt Carrano are continuing their studies in vertebrate paleontology and functional morphology. Additionally, Rick is preparing a manuscript with Peter Dodson on microvertebrate sites of the Judith River Formation. Matt is examining the jaw mechanics of the primitive ceratopsian *Psittacosaurus*, and investigating details of posture in higher tetrapod groups. They also report that they have recently completed work on African geckos with Hans-Dieter Sues. Last summer, Laura Panko joined the field crew of Eric Lombard, Stuart Sumida, and Dave Berman, collecting in the Lower Permian of Utah.

Jim Hopson, with coauthor John Wible, has recently submitted a manuscript on the prootic canal and other vascular features of the mammalian ear region. Another paper, arguing against anamodont relationships of dinocephalian therapsids, with Fred Grine and Juri van den Heever, is near completion, as is a detailed description of the skull and partial postcranial skeleton of the primitive anamodont *Patranomodon*, coauthored with Bruce Rubidge.

This winter quarter, Jim will be leading a seminar on the morphology and biomechanics of the locomotor apparatus in synapsids, including mammals, with new student Paul Magwene (late of Harvard) and old students Laura Panko and Rick Blob. He stands to learn as much as the students do. This fall, the VPs joined our invertebrate and botanical colleagues for a seminar on Paleozoic Terrestrial Ecosystems. It was a broadening experience for all.

Tim Gaundin and Yu Chao received their Ph.D. degrees in the spring and summer respectively. Tim has a one-year appointment at College of the Holy Cross, so is still applying for jobs. Chao is teaching anatomy at Chicago State University. Bill Stevens began teaching at Northeast Louisiana State University this fall, but will be defending his thesis early in the new year. (James A. Hopson)

University of Iowa

Carmen M. Jans completed her Master's thesis, Paleoeology and Mammalian Biostratigraphy of Duhme Cave, Johnson County, Iowa, last December. The lowest level of the excavated cave fill dated 21,780 +/- 240 yr BP and contained a mosaic of coniferous and deciduous forest species in association with prairie taxa. Late Holocene deposits were superposed on the late Wisconsinan deposits; there was no sedimentological or stratigraphic evidence of an unconformity between the two units. The Holocene deposits contained woodland vole remains with an unusual fourth triangle on the first lower molar. This pattern, subsequently identified from specimens in other eastern Iowa sites, is reported (Jans, 1993) in Volume 10 of *Current Research in the Pleistocene*. Paula Thorson has advanced her dissertation research on the Mud Creek localities of eastern Iowa. The Mud Creek biota has been controversial for two decades because it appears to represent a mesic association in the center of the prairie peninsula at the peak of the altithermal and time of projected prairie expansion. Altithermal age of one highly fossiliferous Mud Creek section has been verified by three radiocarbon dates; these are reported (Thorson, 1992) in *Current Research in the Pleistocene*, Volume 9. Now that the time of deposition is secure, Paula is examining the vertebrates, plant macrofossils (leaf beds, no less) and pollen from the various localities. Rachel Benton, on research leave from the National Park Service, is now established in Iowa City and will work on Quaternary mammalian paleoecology for a dissertation. Quaternary fissure fills in the Green River Formation will be a primary aspect of Rachel's work. Holmes is on development leave this semester and he certainly can use the development! Projects include (1) completion (with Carl Falk) of a summary article on micromammal taphonomy in plains archaeological sites, and (2) an ordination analysis of Late Holocene mammalian faunas (with Russ Graham) across the prairie/forest ecotone between eastern and western Iowa. (Holmes A. Semken, Jr.)

University of Kansas

Larry Martin has been working on the functional morphology of sabertoothed cats as well as doing additional work on the anatomy of Mesozoic birds. Published recently is his paper on hypsodonty in rodents and a paper with Xiaoming Wang on the taphonomy of Natural Trap Cave. In July, Hans-Peter Schultze and John Chorn excavated the remaining parts of a pycnodont in the Niobrara of western Kansas which Duffer Mauck discovered and kindly donated to KU. They then went to 12,000 ft altitude northwest of Durango, Colorado, to collect Devonian fishes. The fauna is similar to that described by Denison (1950) with more complete specimens (not only scales). It would be possible to find even better material if one could get permission for an excavation but it is a wilderness area. The flood last summer cut a deep canyon into the Upper Pennsylvanian/Lower Permian at the overflow of a reservoir close to Manhattan, Kansas. Here students found teeth of the rare elasmobranch, *Bobbodus schaefferi*; Ron West excavated the nearly complete palatoquadrate.

Hans-Peter spent one month in Europe organizing the Gross Symposium in Grottingen, his former academic home. He was able to take part in the discussions of the relationship of conodonts to vertebrates; the arguments for such a relationship do not appear convincing. Hans-Peter presented a summary talk on the histology of actinopterygian scales at the Eichstätt meeting. At the excursion following the Eichstätt meeting, he was impressed by the professionalism of private collectors in Italy and the amount of time and money which they invest in their hobby. They are eager to find professionals who have the time to study the material which is deposited in local museums. Leaving the last quarry, H-P had to hurry to Milano to take the night train to reach Berlin for negotiations. The offer was too good not to be accepted. After all promises have finally been counter signed, H-P has accepted the position. He sees the possibility to rebuild a very strong center of paleontology at the Museum für Naturkunde of the Humboldt-Universität in Berlin. He can add three new scientist positions to the staff. He will start on the first of July in Berlin and Gloria will start in September!

Gloria Arratia came back to Lawrence at the end of August, after four months of research in Sweden and Germany, where she enjoyed a wonderful and productive time at the Section of Paleozoology (and periodic visits to the Section of Vertebrate Zoology, Ichthyology) at the Swedish Museum of Natural History and at the Jura Museum in Eichstätt. In Sweden, she worked with Jurassic fishes and found some excellent pachycormiforms, among other beautiful specimens, so that P. Lambers from Holland joined her in Stockholm to write a paper together on pachycormiforms. Part of her stay in Germany was dedicated to the organization of the international meeting Mesozoic Fishes Systematics and Ecology and to a special exhibit on Jurassic localities of Bavaria, to be presented to the participants of the meeting. After the meeting, Gloria participated in the field trip to the Triassic localities in northern Italy organized by A. Tintori and other Italian colleagues; a most impressive experience because of the Italian hospitality and the incredible amount of fossil fishes of excellent preservation. A. Tintori and Gloria are putting together the material to work in the revision of *Prohalecites* and other controversial Triassic forms, hoping to clarify the structure and interpretation of ural neural arches, uroneurals, lower jaw, etc.

Gloria has dedicated a lot of time to editorial matters including: 1) The preparation of the proceedings of the meeting in Eichstätt, which will be published by Verlag. The review process for 34 manuscripts is completed; all manuscripts should be in press by the end of April; 2) the preparation of a volume Contribution of Southern South America to Vertebrate Paleontology. Here the review process moves slowly because the manuscripts are very long! Still, Gloria plans to have the volume printed by the end of 1994. Gloria has several manuscripts in press or submitted on fossil and Recent teleosts and the relationships among teleostean lineages. She hopes to soon be finished with the illustrations of a monograph on new fishes from the Jurassic of Bavaria.

Gloria and Hans-Peter are working on the organization of a field trip to northern Chile. They will visit Jurassic localities in the Cordillera de Domeyko in the spring of 1994. They have received a grant from the National Geographic Society, and they hope to collect numerous important specimens. John Chorn, Kate Shaw, and Chilean invertebrate

paleontologists will participate in the field trip. Gloria and Hans-Peter will have a busy time because, in addition to the field trip, they have been asked to give conferences and seminars at several universities.

Another postdoc, Antonio de la Pena, will begin to work with Gloria starting in January. Antonio has been awarded a Fullbright fellowship to study Tertiary teleosts from various localities of Spain. Francisco Poyato-Ariza continues for a second year as a postdoc with Gloria. He has finished two manuscripts on fossil gonorynchiforms from Spain, and he is working with a systematic revision of fossil and Recent gonorynchiforms. Parallel to these projects, he is studying various nongonorynchiforms from the Lower Cretaceous of Spain. Francisco is also involved in the organization of the 2nd International Symposium on Lithographic Limestones and Fossil Lagerstätten, which will be held in the beautiful city of Cuenca (Spain) in July 1995. The field trips will be to the Lower Cretaceous outcrops of Montsec (Lerida) and Las Hoyas (Cuenca). For further information, write Francisco at KU.

Rodrigo Soler finished his contribution on euselachian sharks from the Pennsylvanian of southern Spain for the proceedings of the Gross Symposium. He could prove a marine connection between Upper Carboniferous coal basins in Spain and central Europe. He continues with the project, now writing up the xenacanth sharks of Spain in comparison with those from northeastern Kansas.

Dave Frailey continues to sandwich visits to the museum between his classes in human anatomy. He is pleased to have a month of taking measurements from Recent rodents behind him and reports progress on his study of the caviomorph microfauna of Amazonia. Jonena Hearst is busy with the taphonomic analysis of the late Pliocene Birch Creek fauna from Idaho. She would be interested in discussing lacustrine taphonomy with interested parties. She hopes to be writing the dissertation this coming summer (willing, of course, the creek don't rise!).

We welcome Chris Fielitz to KU. Chris is a new student from the University of Illinois at Chicago where he received his masters'. He plans to work on the systematics of *Enchodus* for his Ph.D. (Caroline Alexander)

University of Michigan, Museum of Paleontology

Philip Gingerich and Xiaoyuan Zhou are studying a new archaeocete skull and axial skeleton with sacrum, pelvis, and femur from Pakistan, expertly prepared by Bill Sanders, which was found and will be published with S. Mahmood Raza, Muhammad Arif, and Mohammad Anwar of the Geological Survey of Pakistan. This specimen is a more advanced caudal swimmer than the *Indocetus* specimens described in their *UM Contributions* paper last year, and it documents an important stage in the evolution of caudal swimming in whales.

Philip Gingerich, Bill Sanders, and Will Clyde joined Elwyn Simons and Prithijit Chatrath for a very productive field season in Egypt in October and November 1993. Most of their time was spent in Zeuglodon Valley, where they were fortunate to locate several very complete skeletons of *Prozeuglodon* that will form the core of Mark Uhen's dissertation research. They also found excellent skulls and associated skeletons of several different sirenians to be studied with Daryl Domning (Howard University). The new sirenian specimens should go a long way toward straightening out the tangled systematics of Mokattam sirenians and improve our understanding of the early diversification of Sirenia. New UM graduate student Jonathon Bloch spent the fall term working with Simons' team excavating primates and other mammals in continental beds of the Fayum.

Will Clyde has a paper in press with Philip Gingerich comparing evolutionary rates of size and shape in molars of *Cantius*. They recently submitted another paper on lower Eocene paleomagnetic stratigraphy of the Willwood Formation in the McCullough Peaks of the northern Bighorn Basin, complementing and extending earlier work done with Bob Butler and Ev Lindsay in the Clarks Fork Basin.

Bill Sanders is completing his dissertation on australopithecine vertebral columns. Bill and Brian Bodenbender have a paper in press on the Moroto vertebra. Bill plans to return to the Manonga Valley in Tanzania with Terry Harrison (New York University) in the summer of 1994 to collect more late Miocene Pliocene mammalian fossils.

Gregg Gunnell has been busy with last summer's collections from the Bridger Basin. Gregg, along with Bill Bartels (Albion College) and Beth Strasser (CSU, Sacramento) led an enormous field party (20+) into the early Bridgerian badlands north of Green River, Wyoming. The efforts of this large group produced over 700 fossil mammals from the normally sparse earliest Bridgerian (Bridger A). Gregg has papers in press on the Chappo (late Paleocene) fauna from Wyoming and on a new cervid from the Pleistocene of Nebraska. Gregg has also submitted a paper on middle Eocene omomyid primate systematics and has finally found the time to start working on a new adapid skull from the Uintan of California. (Gregg Gunnell)

University of Nebraska State Museum

Paleontological investigations at UNSM continue to focus on the Cenozoic history of the Great Plains. In western Nebraska Bob Hunt and Rob Skolnick have been conducting detailed biostratigraphic studies, giving particular attention to Arikareean and Hemingfordian localities. Last summer Loren Toohey assisted Bob and Rob in relocating several of the important Hemingford Quarries: sites Toohey and Guy Johnson had discovered and excavated for UNSM in the 1930s. An unexpected bonus of Hunt's 1991 field season was the discovery of another carnivore den complex even older than the Beardog Den Site at Agate National Monument. The new den site comprises three-dimensional burrow fills up to 10 m long and 1 m across, and is still under investigation.

A preliminary report on the site was presented at the SVP annual meeting in Albuquerque.

As paleontologist for the Nebraska Department of Roads, Bruce Bailey monitors the status of sites in all areas of the state. Recently an early Arikareean locality was discovered prior to highway construction in Dawes County. It has proved to be rich in microvertebrates, and has produced several new taxa, including a vesperilionid and a soricine shrew. A bigger roadkill was reported from Dawson county in the form of a *Mammuthus* cropping out of a Peorian Loess borrow pit. Bruce, George Corner, and many local volunteers spent much of September recovering the skull, tusks, axial skeleton, and fragmented limb bones from the site.

In 1991, Bruce received notice that the historic Valentine quarries, first excavated by UNSM in 1916, lay in the path of a proposed right-of-way for US Highway 20. UNSM had two summers, 1992 and 1993, in which to conduct salvage excavations at the West Valentine and Railway B quarries. Mike Voorhies reports that new taxa continue to turn up in this extremely diverse Barstovian fauna.

Ashfall Fossil Beds State Historical Park opened in 1991, and by 1993 nearly 40 *Teleoceras*, equid, camelid, and moschid skeletons had been uncovered in the Rhino Barn. Mike Voorhies and preparators Greg Brown and Ellen Stepleton are sharing excavation and interpretation responsibilities at the park during the summer months. This extraordinary site is well worth a visit, and for those interested in seasonal employment at Ashfall, please note the Jobs announcement elsewhere in this issue.

Undergraduates Cinda Timperley and Holly Wissink are now seasoned veterans from the Ashfall excavations. High school senior Mike Jones was an outstanding colleague working at Valentine and several other UNSM sites. As an honors science student, Jones is independently researching a Pleistocene locality in southwestern Nebraska.

Greg Brown is busy with exhibit and casting projects for both UNSM and Agate Fossil Beds National Monument. He was recently elected to the Council of SPNHC (Society for the Preservation of Natural History Collections) and encourages preparators and collection managers in vertebrate paleontology to join this group. Membership is inexpensive and certainly worthwhile.

We're pleased to welcome Ph.D. candidate Xiao-Feng Chen to UNSM. For his dissertation research, Xiao-Feng will be studying *Paleogale* and the early mustelids. Hannan LaGarry-Guyon's doctoral research centers on taphonomic bone processing, but he has also devoted three summers to the surveying of paleo resources on the Ogalala National Grasslands. In conjunction with these investigations, an extensive set of Cenozoic trackways was located in Toadstool Park, and Hannan is assisting the US Forest Service in their study and preservation.

Carrie Herbel recently returned to UNSM from Pennsylvania. She expects to complete her thesis soon and is eager to continue research into bone diagenesis. The museum, of

course, recognized an able hand and thus Carrie was promptly delivered to the excavations at Valentine, then to the casting lab (to recreate an Agate Springs bonebed), and finally to Exhibits (to assist in their refurbishing of a thickly-shellacked plesiosaur). Chris Rudnick is also finishing his thesis: a study of Clarendonian insectivores from one of Morris Skinner's sites in Brown County.

Collections manager George Corner reports that UNSM's vert paleo collections are now readily accessible by staff and visiting researchers. Through an NSF Facilities Grant, new steel cabinets were purchased, and collections have been rearranged by locality and stratigraphic occurrence, rather than by taxon. This enormous task completed, George has been free to resume fieldwork and research endeavors, primarily with Pleistocene faunas.

George and Mike Voorhies, along with volunteer Marv Hix, are investigating a new Irvingtonian locality, the Albert Ahrens Site, which is producing a rich sample of microvertebrates from a time interval (ca 400 500 ka) otherwise poorly represented in our collections. (Ellen Stepleton)

Rocky Mountain Region

Denver Museum of Natural History

The past six months have been busy at the Denver Museum of Natural History. Richard Stucky and crew had a successful field season in the Wind River, Sand Wash, and Bridger basins, collecting much Eocene material including a skull and jaws of *Smilodectes*, discovered by Pablo Puerta, a visiting scientist from the Museo Paleontologico Egidio Feruglio of Argentina. Pablo was here for three months on an exchange program studying North American Eocene faunas and stratigraphy and learning new techniques of preparation. The *Diplocynodon* discovered by John Gurche last year was successfully recovered from the Wind River Basin.

Ken Carpenter led a field party to the Garden Park area of Colorado to continue collecting material from the Morrison beds. Of note are egg shells excavated by Karen Alf from a possible nesting site and the discovery of a new of *Docodon*. Much other material was recovered, but no entire skeletons this year.

Kirk Johnson and a crew spent a week in the Bighorn Mountains of Wyoming collecting Devonian specimens, including eurypterid claws and ostracoderm head shields.

Elaine Anderson and Don Rasmussen again led a large field party to Porcupine Cave to continue excavation of Irvingtonian mammals. This summer they made a large collection from the Badger Room, while adding to the already large collection from the Velvet Room.

In the early summer two visitors brought in and donated a nearly complete bird skeleton they had collected from the Clare Quarry, a private quarry in Florissant beds. Bob Chandler of the Florida Museum of Natural History tells us that it is a specimen of a new genus and species of owl.

Most of the energy of the department is focused on the new exhibit, Prehistoric Journey, scheduled to open in October of 1995. Jon Christians finished the mounting of the *Allosaurus*, after much trial and tribulation. Jon is presently researching Gilmore's interpretation of the gastralia of *Allosaurus*. Ken finished up the *Stegosaurus* and mounted the *Coelophysis* material in a free-standing pose. The *Edmontosaurus* that was mounted against the north wall of the old dinosaur hall has been taken down and nearly completely remounted, including representations of the ossified tendons, in the new exhibit by Jerry Harris and Jennifer Moerman. The head will be added after it has been molded by Jennifer and Jerry. The *Diplodocus* skeleton, long a focal point of the museum, will be dismounted in January for remounting and repositioning in the new hall.

During November the department hosted a symposium on Colorado paleontology where professionals and amateurs met to hear talks on and discuss the state of paleontology in Colorado. From April 14-16 the department will be hosting the Western Area Vertebrate Paleontology meeting in the museum. Included is a field trip to the classic sites and quarries in the Denver Basin, along the Front Range, and in the Raton Basin.

Richard Stucky reports that the chapter on Mammalia he coauthored with Malcolm McKenna is out in *The Fossil Record 2*, edited by Michael Benton. His chapter on the Dichobunidae, coauthored with Jennifer Snyder for the mammal tome edited by Christine Janis and others will be finished by the end of the year. Ongoing research includes a study, with Lisa Torick, of worldwide faunal turnover at the Paleocene-Eocene boundary and a study with Sheri McGeehee of the basicranial morphology of *Didelphodus*. Kirk Johnson and Jerry Harris are studying specimens of four-toed tracks of a theropod? from Wyoming. Alan Keimig continues to receive documents from all over the world detailing other countries' laws governing collecting and removal of fossil specimens from their territories.

The department continues work under its NSF collection improvement grant. A large shipment of new metal cabinets was received this fall to better house the specimens. Cataloguing of backlogged specimens is proceeding and with the ARGUS computer system we are able to provide a list of specimens and localities to interested parties.

Pat Jablonsky is leaving us to take a position as the head of the Carlsbad, New Mexico, Museum. She hopes to find time in her busy schedule to continue research on bats and sloths from the caves she likes to frequent. We wish her all the best. We welcome Karen Arnedo as the new Office Manager/Registrar in the department. (Logan Ivy)

Garden Park Paleontology Society

Garden Park Paleontology Society very proudly had the preliminary design for Dinosaur Discovery Center on display at the recent SVP Annual Meeting in Albuquerque, New Mexico. The model and several of the panels from the architectural firm of Anderson Mason Dale in Denver received a great deal of attention and favorable comments. GPPS's next goal is major fundraising for the center. Donna Engard, President of GPPS, was appointed as amateur representative to SVP's Government Liaison Committee. A number of presentations on current research in the Garden Park Fossil Area were also presented at the meeting. (Pat Monaco)

Hagerman Fossil Beds National Monument

Summer and fall were busy at Hagerman Fossil Beds (HAFO in official National Park Service acronym terms) as we have started a complete inventory of all known fossil localities. Early in the summer a series of reference markers were placed throughout the monument and accurately located within centimeters using a Global Positioning Satellite (GPS for those who collect acronyms, an absolute must, as Greg has learned after a year with the government). Location of each reference marker was done by surveyors from the BLM (everyone should know that one). After a fossil site has been relocated, it is surveyed relative to two of these reference markers using a laser transit which allows us to survey a site to within a cubic foot accuracy. One of the advantages of the laser transit is that it has a navigation feature, so once a site has been located relative to a particular reference marker, its coordinates can be entered into the computer in the transit which then uses changes in tone to direct an individual back to the site, thus eliminating a need to physically mark localities. Eventually all of the surveyed sites will go into the GIS (Geographic Information System) that we are developing here at HAFO. We hope that this data base will not only help us in our resource management of the fossils, but will be a useful tool for anyone pursuing research projects here at HAFO.

Survey work this last summer was done by a dedicated group of volunteers (oops, officially VIPs, which stands for Volunteers in Parks) under the direction of Chris Force. Approximately one-third of the known 300-plus sites were relocated and surveyed this last season and a number of new sites were located, as well as numerous individual specimens. Perhaps the most exciting discovery was a mandible of *Borophagus*, with the canine, fourth premolar, and first molar, making it the best-preserved specimen of this genus from Hagerman. Greg McDonald is working on a short paper to describe the specimen.

Other work at HAFO includes a detailed study of the sedimentology and stratigraphy of the north end of the monument near the Horse Quarry. The work is being carried out by Dana Lee, a graduate student at Idaho State University. Results of this study will also go into our GIS and we hope to use this information to see if there is any correlation between location of microvertebrate concentrations and particular sedimentary environments and stratigraphic levels. In the area of nonvertebrate discoveries, while measuring sections, Dana discovered a log in an old river channel. There have been no previously described records of logs from the area of the monument, but what was totally unexpected is that the log retains its original organic content and has not been

permineralized. John Harris, now at the University of Utah, is currently doing isotope work on a sample. Analysis of the log will be integrated into his broader study of isotopes in tooth enamel from various herbivores in the Glens Ferry Formation. We also were visited by Steve Williams of the University of Utah, who is working on volcanic ashes in the Glens Ferry Formation and collected samples of both silicic and basaltic ashes from within the monument. We look forward to the results of his work as providing us with a tighter absolute chronology for the sediments in the monument. (Greg McDonald)

Idaho Museum of Natural History

Allen has officially retired and we are still in the midst of selecting a new preparator. This has not been easy since there were many good applicants 14 met the minimum requirements. The crash part of the exhibit program is over though a lot still remains before it can be called completed. Once again, Bill is trying to get caught up with other backlogs including a couple of nearly fossilized manuscripts. Mary Thompson is on the downhill pull with her thesis and should finish this year. Sue Miller continues to put in occasional appearances when she can get away from her work at the Idaho National Engineering Laboratory. We were fortunate to get Bruce MacFadden here to give a couple of horse talks. He was spending part of a sabbatical at the University of Utah. A modest endowment to support our vertebrate paleontology programs has been named in honor of John A. White, who did so much while here. Additions to the endowment would be *most* welcome! (Bill Akersten)

Geology Department, Sheridan College, Wyoming

The field season of 1993 had Sheridan College paleontology faculty and students working at a number of sites within the Morrison and Cloverly formations of northern Wyoming.

The sauropod quarry continues to provide disarticulated dinosaur specimens. Three new partial sauropod skeletons were located by field geology students in the fall of 1993. Plans for the next field season include excavation at these Morrison sites.

Mike Flynn continues his research on the biostratigraphy and paleogeographic setting of the Jurassic Morrison Formation dinosaur quarries within northern Wyoming. Field visits were made throughout the summer to various sites in the Big Horn Basin. Among those visited were Mike Brett-Surman from the Smithsonian and Bob Harmon, Pat Leiggi, and Des Maxwell from the Museum of the Rockies. (Mike Flynn)

University of Wyoming, Department of Geology and Geophysics

Jay Lillegraven and Jaelyn Eberle continue to work on their projects dealing with the geology and paleontology of the Hanna Basin in south-central Wyoming.

Ross Secord has begun thesis work on a new middle Paleocene locality containing mostly large mammals in the Carbon Basin of Wyoming.

Seaghan Uibreaslain has also been working on Jay's Hanna Basin project. The good news is that the screen washing is done. The bad news is all the material needs to be picked. Seaghan will also have some paleontological sculptures at the Prehistoric Wildlife Show at the Saguaro Gallery in Park City, Utah.

After four summers of field work on Jay's field crew and six years of bumming around the museum (as Jay once put it), Anton Wroblewski has begun work on what will eventually become his Master's thesis. Anton is concentrating on the surprisingly diverse Lancian dinosaur fauna, as well as the crocodylians found in the Lower Ferris Formation of the Hanna Basin. Among other things, he hopes to shed new light on the question Was there really a dramatic decrease in dinosaurian diversity prior to extinction during the latest Cretaceous in western North America?

Mike Leite continues to work on various projects in and around Wyoming, with plans to move to a new location in early 1994.

Brent Breithaupt is developing various public programs at the UW Geological Museum. He continues to research the history of paleontology in Wyoming and the taphonomy of various Mesozoic sites in the state. (Brent Breithaupt)

West Coast Region

Raymond Alf Museum, Claremont, California

This summer's 30-day field expedition for high school students to collect fossils, The Peccary Society Summer Field Trip, was very successful. Led by museum director Don Lofgren, the group travelled to Mazourka Canyon, California; Ichthyosaur State Park, Nevada; Fossil Ridge, Colorado; The Haystacks, Wyoming; Shalimar Ranch, Nebraska; and Bug Creek, Montana. On the trip, students learn basic paleo field techniques and how to record provenance data so that fossils collected retain their maximum scientific value when brought back to the museum.

The museum's record of student involvement in fossil collecting activities spans nearly 60 years. It all started when Ray Alf led a group of students to Barstow in search of Miocene mammals. A peccary skull was soon found which was described by Chester Stock in 1937. Thereafter, fossil collecting trips led by Ray Alf became known as Peccary Trips and students who went with Ray on these trips were members of The Peccary Society. Peccary Society members include Malcolm McKenna, David Webb, Dan Fisher, Donald Kron, and others.

Members of The Peccary Society gathered together for a party last April to celebrate the official formation of The Peccary Society, the 25th anniversary of the museum, and to honor Ray Alf. Highlights included film shot in 1937-39 showing Ray Alf and students in Nebraska working at Agate Springs and camping and picnicking with Harold Cook and family at the Cook Ranch. After showing the film, Dan Fisher, Pat Muffler, Ken DeNault, and David Webb described the positive effect Ray Alf and The Peccary Society had on their lives. Then, Ray Alf was given a plaque commemorating his inspirational leadership to the members of The Peccary Society. After Ray gave his reflections on The Peccary Society, the Peccary Song was sung. Wann Langston followed Ray with a slide presentation on his work with *Quetzalcoatlus*. Malcolm McKenna closed the evening with a personal thank you to Ray Alf.

Museum staff are busy working on a long-term project to upgrade the museum so that it will receive accreditation status from the American Association of Museums by 1996. Upgrade projects include installation of a new computer curation system, reorganization of the collections, seismic upgrading of storage areas, and installation of a preparation lab. We are also field checking old museum collecting sites to upgrade our locality files.

A spring collecting trip to the Barstow Formation yielded a palate of the very rare *Megahippus*. Another spring trip to the Goler Formation by Don Lofgren with Malcolm McKenna yielded the lower molar of an anisochine condylarth, thus Don joins The Goler Club (you know who you are).

Last April, Mark Goodwin of the UCMP and associate Bob Cooper molded a very rare trackway of *Amphicyon* on display in the museum. Casts of the tracks will be displayed with a skeletal cast at the American Museum of Natural History. In exchange, the Alf Museum will receive a cast of the skeleton of *Amphicyon*.

Don Lofgren's revised dissertation manuscript, *The Bug Creek Problem and the Cretaceous Tertiary Transition at McGuire Creek, Montana*, is now in press and will be published by the University of California Publications in Geological Sciences. (Don Lofgren)

George C. Page Museum

Pursuant to the administrative reorganization of the Natural History Museum of Los Angeles County and its satellites last July, the Vertebrate Paleontology and the Rancho La Brea sections were merged, and Ken Campbell was appointed section head. Despite this increase in administrative responsibility, Ken continues his work with the overwhelming task of curating thousands of bird specimens from the collections at the Page Museum, and has identified several species new to Rancho La Brea including a crane.

Shelley Cox and volunteers are busy supplying more birds for Ken to curate. They continue working on the last of the mammoth and mastodon manus and pes elements after finishing the scapulae. John Harris and Shelley have nearly completed their manuscript on the proboscideans from Rancho La Brea.

Ted Connors will be putting the finishing touches on the organization of the nonsabertooth felids by the end of January and beginning the curation of the edentates (a project that may take a year or more). Curation of postcranial dire wolf (*Canis dirus*) material excavated by the Southern California Academy of Sciences in 1910 continues by long-time volunteer Mary Romig. Chris Shaw is overseeing these projects, along with the curation of the *Bison antiquus* postcranial elements by Rita Pudenz. Chris will be coordinating a major shift of edentates, equids, and camelids within the main storage area of the Page Museum, beginning in the first quarter of this calendar year. At the same time, he also hopes to get back on track with his research goals. We all hope that the coming year holds more positive than 1993 for the future of vertebrate paleontology, not only in Los Angeles, but for all of North America! (Chris Shaw)

BULLETIN BOARD

SVP News Bulletin Back Issues

For sale: back issues of the *SVP News Bulletin*, October 1977 (no. 111) to present; 47 issues, set lacks nos. 142, 149, 150. Excellent condition. Best offer received within two months of publication. Dale Jackson, 6416 Dancer's Image Tr., Tallahassee, FL 32308. Phone (904) 224-0626 (days), (904) 893-5938 (eve.); fax (904) 681-9364. (Dale Jackson)

Canadian Prehistoric Life Stamps

To celebrate Stamp Month 1993, Canada Post Corporation has issued four stamps featuring three dinosaurs and one marine reptile *Massospondylus*, *Albertosaurus*, *Styracosaurus*, and *Platecarpus*. Australia and New Zealand have also issued sets of dinosaur stamps. All three issues have been assembled in an International Dinosaur Stamp Collection offered through Canada Post Corporation for \$12.95 Canadian, plus applicable taxes. The last day of sale for these stamps is March 31, 1994. (H. B. S. Cooke)

Saur-Points: A Plea for Correct Colloquial Dinosaur Names

As a writer of popular works about dinosaurs, I am continually struggling with both paleontologists and editors to ensure that the colloquial forms of taxon names are given

the correct endings. To illustrate, consider the term ankylosaur. To what does it refer? A member of the suborder *Ankylosaurus*? A member of the family Ankylosauridae, possibly belonging to a genus other than *Ankylosaurus*? Or is it a member of the suborder Ankylosauria? In everyday paleontological usage, it can mean any of the above, and therein lies tremendous potential for confusion.

Similarly, what is a brontosaur? It is rapidly coming to mean a member of the order Sauropoda, despite the fact that the genus name *Brontosaurus* is a junior synonym of *Apatosaurus*, (known for decades now, despite popular claims to the contrary) and despite the fact that no valid higher taxon name bears any resemblance to the word brontosaur. Unfortunately, the term sauropod has its own failings. Does it mean a member of the infraorder Sauropoda? A member of the more inclusive suborder Sauropodomorpha? Why not call them sauropodans and sauropodomorphans, respectively?

While watching a recent television interview, I heard a prominent dinosaur specialist use the term mamenchisaur in a context where the name *Mamenchisaurus* would have been entirely synonymous. If it is possible to say that mamenchisaur is a sort of brontosaur, and that both are sauropods, then the incautious use of such jargon will certainly confuse all who take the time to listen, especially those lay people who are already struggling to understand the diversity, phylogeny, and classification of dinosaurs. This problem is widespread, and is not confined to the popular literature. To illustrate, consider what is meant by the term dromaeosaur (vegetarian dromaeosaur no less) in a recent article in the prestigious journal *Science* (Morell: 1993, *Science* 261:1518-1519).

As Padian (1993, *JVP* 13[3]:381-383) points out, most of the research effort in dinosaur paleontology is systematic in nature, while most popular writings about dinosaurs focus instead on paleontological and paleobehavioral reconstructions. If, as Padian suggests, the public should be given a more accurate account of the systematic studies that constitute the bulk of dinosaur science, then dinosaur paleontologists should surely choose unambiguous colloquial names in order to clearly indicate appropriate taxonomic groupings.

Ankylosaurus has no colloquial form, nor does any other dinosaur genus. Members of the family Ankylosauridae should be called ankylosaurids. Members of the Ankylosauria should be called ankylosaurians. Members of the Sauropoda should be called sauropodans. And so on. The forms of these names follow the conventions observed (with localized and equally problematic exceptions) among the majority of the world's English-speaking systematic zoologists. If, for whatever reason, imprecise names are unavoidable, the least a writer can do is to indicate what meaning is intended, as for example the family of dinosaurs called hadrosaurs, or the sauropod suborder.

Consider, however, that it is the very word dinosaur which is to blame for this mess, although I'm sure it would be too much to ask for us all to adopt the name dinosaurians instead. (John Alcorn)

Kamoya Kimeu Retirement Fund

Kamoya Kimeu, Kenya's famous fossil hunter, must retire at age 55 at the end of this year following Kenyan Government policy. He will be given only a tiny lump-sum government pension. We are pleased to announce that a special fund is being set up to help Kamoya in his retirement years. We are inviting all paleontologists who have either worked with Kamoya or who have used any of the fossils found by him in their research to contribute to the fund. The fund will be managed by Johns Hopkins University and the interest income will be sent to Kamoya regularly. Upon the deaths of Kamoya and his wife Mary, the fund will become a scholarship fund for Kenyan students. Please make checks payable to The Johns Hopkins University for the Kamoya Kimeu Fund, and send them to Alan Walker; Department of Cell Biology and Anatomy; Johns Hopkins University School of Medicine; 725 North Wolfe Street; Baltimore, MD 21205. (Alan Walker and Richard Leakey)

Museum of Geology Field Paleontology Summer 1994

Nine separate sessions are offered by the Museum of Geology. The offerings include opportunities to participate in excavations and reconnaissance paleontology that include Morrison dinosaurs, Badlands giant pigs and rhinos, marine reptiles, and Hell Creek dinosaurs. Credit and noncredit options are available. For more details write Philip R. Bjork, Museum of Geology, 501 E. Saint Joseph St., Rapid City, SD 57701-3995, OR call (605) 394-2467.

CALENDAR OF EVENTS

Desert Research Symposium First Notice and Call for Papers

The Desert Research Symposium, combining the 8th Annual Mojave Desert Quaternary Research Symposium and the Desert Studies Consortium Symposium, will be held 20-23 May 1994 at the San Bernardino County Museum, Redlands, California. Papers will be presented at the museum on Friday, May 20, and Saturday, May 21, beginning at 9:00 A.M. Registration is \$20.00. Abstracts are due 14 February 1994. For further information, please contact Jennifer Reynolds, MDQRC, San Bernardino County Museum, 2024 Range Tree Lane, Redlands, CA 92374; phone (909) 798-8570, fax (909) 798-8585.

Western Association of Vertebrate Paleontology

The Western Association of Vertebrate Paleontology annual meeting will be held from 14-16 April 1994 at the Denver Museum of Natural History. Plans include a field trip on the 14th to visit some of the Mesozoic fossil sites along the front range from near Denver to Cañon City and to examine the K-T boundary in the Raton Basin. Bus transportation is limited to 40 individuals. Regular platform sessions will be held on the 15th and 16th. Posters are welcome as well. The meeting will be hosted by DMNH and the University of Colorado Museum, and the Friends of Dinosaur Ridge will hold a barbecue at their new facility near Morrison. Individuals interested in receiving information on WAVP 1994 can write to Department of Earth Sciences, Denver Museum of Natural History, 2001 Colorado Boulevard, Denver, CO 80205, or call (303) 370-6473, or fax to (303) 331-6492, or e-mail to rstucky@csn.org. Participation is limited to 220 individuals, so we recommend early registration.

PUBLICATIONS

Fossil Fishes as Living Animals (Elga Mark-Kurik, ed.)

Tallinn 1992, 299 pp, 111 line drawings, 25 plates. ISSN 5-7976-0409-4. Approximate price US\$20.

This book presents fossil lower vertebrates in context of their ecology, functional morphology, ontogeny, relationships, and environment. It includes representatives from the Ordovician of South America to the Mesozoic of Russia. Most contributions deal with Silurian and Devonian fishes. Ecological adaptations of different agnathans and fishes are presented, and the environment they lived in is reconstructed. Several papers are concerned with functional aspects of movement and feeding. Individual development is deduced from size series for different groups. In addition, descriptions of rare early representatives of lower vertebrates are given. The fishes are presented as living organisms in their time.

The book includes the contributions of the international colloquium on the Middle Palaeozoic fishes held in 1989 in Tallinn, Estonia. It was the second meeting in Tallinn of a series of international meetings on Paleozoic vertebrates. This book is the first volume of the *Academia*, a new publication series of the Academy of Sciences of Estonia including natural sciences and humanities. If you would like to order No. 1 of the series *Academia*, *Fossil Fishes as Living Animals*, you should pay US\$20 or its equivalent to our account and inform us about your subscription at this address: Publishing Department of the Estonian Academy of Sciences; EE0001 Estonia pst.7; Tallinn, Estonia. Our bank: Estonian Commercial Bank of Industry and Construction; Account No. 3345403 for the Presidium of Estonian Academy of Sciences. (William E. Bemis)

From the Dunes: The Search for Dinosaurs in the Gobi Desert (John Lavas)

This book summarizes the last 100 years of paleontological exploration in the Gobi Desert, and is probably the only such English-language survey. Although large quantities of important dinosaur finds have been recovered here, the area is also noted for its ancestral mammal and avian discoveries. Many of the dinosaurs described are included in a large exhibition now touring Australia, entitled the Great Russian Dinosaur Exhibition. This collection actually consists mainly of Mongolian dinosaurs excavated by Russian workers in the 1940s (and more recently), as well as mammal-like reptiles from the former Soviet Union. The book may be of interest due to the scarcity of English language material on the dinosaurs of Central Asia. Much of the photographic material was supplied by Sergei Kurzanov of Moscow, and is reproduced here for the first time. The book is being offered to readers in the US on a direct mail order basis. The retail price, including postage and handling, would be US\$21, and a trade price could be arranged should a bulk order be required. Order from John Lavas; 29, Panorama Road; Mt. Wellington; Auckland 6; New Zealand (fax 0015649 479 1418). (Tom Rich)

Biography of Benjamin Mudge

A limited number of copies of *The Life of Benjamin Franklin Mudge in Kansas* are available from the grandson, Melville Mudge. This privately printed biography was compiled from the correspondences and other records of Mudge. Copies may be purchased for \$25.00 from Melville R. Mudge; 6722 West 5th Place; Lakewood, CO 80226. (Ken Carpenter)

SEPM Journal Name Change

The *Journal of Sedimentary Petrology* will change its name to the *Journal of Sedimentary Research* effective 1 January 1994. The new journal will be issued in two parts of four issues each, for a total of eight issues. The *Journal of Sedimentary Research Section A. Sedimentary Petrology and Processes* will focus on much of what is in the present journal: largely sedimentology, petrology, geochemistry, and processes. The *Journal of Sedimentary Research Section B. Stratigraphy and Global Studies* will focus on such broader-scale aspects of sedimentary geology as stratigraphy and sedimentary basins. The volume number of the journal will continue in the sequence already established by the *Journal of Sedimentary Petrology*. The 1993 volume of the *Journal of Sedimentary Petrology* is Volume 63; the 1994 volume of the *Journal of Sedimentary Research* will be Volume 64. There is no change in the member and nonmember subscription price. Questions may be directed to the SEPM Council at (800) 865-9765.

POSITIONS AVAILABLE

Student Employment Opportunity Summer 1994

The University of Nebraska State Museum will offer student paleontologist positions for the summer of 1994 at the Ashfall Fossil Beds State Historical Park near Royal, Nebraska. Experienced student diggers will have the opportunity to excavate complete articulated fossil skeletons of late Miocene mammals buried in pure volcanic ash. Student paleontologists act as interpreters and assist with other duties at the Park. Choice of wage or academic credit/stipend. For more information or an application form, please write to: Ashfall Fossil Beds; Box 66; Royal, NE 68773. (Rick Otto)

Hagerman Fossil Beds National Monument

Hagerman Fossil Beds National Monument anticipates having one or two temporary positions for the summer of 1994, depending on available funds. These will be filled at GS 4/5 level depending on the experience of the applicants and can be filled for only a maximum of 120 days. Starting dates are flexible, but primary field season is June through August. Field work includes mapping of fossil localities within monument with laser transit and transcription of data into data base. Work will include some collection of fossils. Previous experience with a transit or mapping is desirable but not necessary. Terrain at Hagerman Fossil Beds can be steep, and summers are hot, so work will be somewhat strenuous. Hagerman Fossil Beds N.M. does not have housing so employee(s) will be responsible for own food and housing. For further information or to apply for positions, contact: Greg McDonald, Paleontologist, Hagerman Fossil Beds National Monument, P. O. Box 570, Hagerman, ID 83332. Phone (208) 837-4793.

Paleontologist/Geologist, Badlands National Park

Within the federal government's Department of the Interior, the National Park Service at Badlands National Park near Interior, South Dakota, anticipates hiring a vertebrate paleontologist/geologist within the park's Division of Natural Resource Management in the next few months. Because this new permanent addition to the park staff must first go through a classification process and final details are not currently available about exact application procedures, we would like to alert the vertebrate paleontological community about this position and provide a park contact for additional information or a vacancy announcement for the position when applications are solicited.

Major duties: Under the direction of the Chief, Resource

Management, is responsible for the development, guidance and implementation of a paleontological management program that includes writing objectives and goals, planning

fiscal management, coordination of fossil research and digs, assistance in curatorial activities, inventory and monitoring of paleontological resources, fossil preparation, conducting specialized staff training on paleontological themes, and providing technical direction, expertise, and advice to Division Chiefs and the Superintendent on paleontological related matters. Supervises one seasonal geological technician.

Salary: \$28,000 44,000 (GS 09/11), permanent, full-time as a career employee.

Recruitment is intended to be open to all sources (not limited to federal government employees) using the government standard application form SF 171 and response to a series of knowledge, skills, and abilities queries.

Duty station: Park headquarters at Cedar Pass, near Interior, South Dakota (population circa 70). Park is located about 30 miles from the towns of Wall, Kadoka, and Phillip, and 85 miles from Rapid City (population 57,000). Interior has grade school (K-8th), no school buses to Wall, Kadoka, or Phillip for high school. Climate has a wide range, from cold and windy in winter to dry and very hot in summer.

It is anticipated that the recruitment announcement will be available in late February or March. For further information or to be placed on a vacancy announcement mailing list, please contact Eldora Halliday, Badlands National Park, P. O. Box 6, Interior, SD 57750; telephone (605) 433-5361 or fax (605) 433-5404.

Preparator, Vertebrate Paleontology

The Museum of Western Colorado is seeking applications for a one- to two-year initial appointment of a preparator of vertebrate fossils. The museum is located in an area rich in fossil vertebrate resources. It has a dynamic field and laboratory agenda which provides specimens for research and educational programs emphasizing dinosaurian paleobiology and geology. Duties for this position include: field work, preparation, casting and molding, exhibit construction, assisting with curation, and the supervision/training of field and laboratory volunteers. Good interpersonal skills are a must. Driver's license is required. Salary range is \$13,000 16,000. Deadline is March 15, 1994. This is a full-time position reporting to the Curator of Paleontology. Send résumé and names of three references to: Richard S. Sims, Director, Box 20,000, Grand Junction, CO 81502-5020.

POSITIONS WANTED

This is a new service offered to members seeking employment in paleontology. Maximum length for each advertisement is seven typeset lines. Advertisements may be edited to fit this specification.

Fossil Preparation/Conservation Work Wanted

Available 11 January 1994 to do fossil work on contract or in a full-time position. Over 20 years experience in mammals and dinosaurs. Specializing in reconstructions for exhibits/research as well as the conservation of fossil specimens. Contact Robert Allen at (203) 248-8798.

OBITUARIES

Valerie U. Reshetov (1947 1993)

On 20 July 1993 Dr. Valerie Reshetov, head of the Mammal Laboratory of the Palaeontological Institute, Russian Academy of Sciences, and member of the Society of Vertebrate Paleontology since 1978 died suddenly in Moscow. Valerie Reshetov arrived at the Palaeontological Institute in 1968 after graduating from the faculty of Vertebrate Zoology and Comparative Anatomy in Moscow State University. His research interests were primarily concerned with Paleogene ungulates, especially tapirs, and also fossil primates, but he was also interested in practically all basic aspects of mammalian research functional morphology, phylogeny, paleofaunas, and biogeography. Reshetov gave a great deal of his time and effort to field research, work which resulted in the accumulation of a huge collection of different groups of fossil vertebrates and invertebrates. He was a participant in 25 expeditions, some of which he organized, and among the most important of which were the Joint Russian-Mongolian Palaeontological Expeditions. Of his publications the most distinguished were monographs on Paleogene tapirs (1979), on bison (1979, together with K. K. Flerov and V. B. Sukhanov and others), on the paleontology and stratigraphy of the Paleogene of the Pre-Altai Gobi (1985, together with D. Badamgarav), on the history of higher primates (1986), a book on V. O. Kovalevski (1986), and a series of papers concerning an Asiatic center of origin for mammals (together with B. A. Trofimov and E. I. Belyaev).

Reshetov possessed an exceptional talent for organization. In 1989 he headed the Mammal Laboratory of the Palaeontological Institute and in the same year became leader of the Russian part of the Joint Russian-Mongolian Palaeontological Expedition. In the difficult financial times of the post-perestroika years Reshetov played an active role in the development of international collaboration between Russian and other paleontologists becoming, in 1991, coleader of IGCP Project 326, The Oligocene Miocene Transition in the Northern Hemisphere. He passed away literally on the day before his departure to Mongolia to lead an international field excursion and conference as part of this project. Valerie Reshetov was both an attentive and demanding supervisor of young paleontologists. Devoted to the interest of fundamental science, in the last few years he spoke out strongly against the commercialization of paleontology in Russia. Reshetov's untimely death cut short his work on a monograph on Paleogene rhinoceroses, a

significant part of which was already completed. (L. P. Tatarinov and B. A. Trofimov; translated by D. M. Unwin and N. N. Bakhurina)

Dirk Albert Hooijer (1919 1993)

After a long illness, Dr. Dirk Hooijer died on 26 November 1993. He was Emeritus Curator of Fossil Mammals at the Museum of Natural History, Leiden, The Netherlands. His research resulted in a great number of contributions to our knowledge of Pleistocene faunas, particularly those of Europe and southeastern Asia. He was particularly interested in patterns and processes of insular evolution. His contributions to our field were numerous, and his presence will be greatly missed.