news04 COMMENT: This electronic version of the newsletter was created by scanning the original copy and then editing as needed. Apologies for any scanning errors that have not been corrected. Karsten E. Hartel, MCZ January 1994. hartel@mcz.harvard.edu

CURATION NEWSLETTER No. 4 February 1982 American Society of Ichthyologists and Herpetologist

NOTICE - At the ASIH annual meeting in Corvallis the Ichthyological Subcommittee on Curatorial Supplies and Practices was reappointed as a full committee and broadened to include herpetology. We will continue to produce the Newsletter, this issue containing the first major article on herpetological matters. We hope that it will generate additional herpetological contributions.

At the beginning of the new year, we would like to thank all of the contributors to the Newsletter, especially Ralph Taylor. In addition, our committee would like to acknowledge the continued support and encouragement given by Bob Gibbs, Bruce Collette, and Bill Fink.

FIELD PRESERVATION OF LARGE FISHES - Injection of fixative into the gut and musculature of large fishes in the field is an unpleasant and often a time-consuming task. This procedure is generally done with a syringe and hypodermic needle. Unfortunately, this requires continual filling of the syringe and cleaning of the needle as it becomes clogged with scales and flesh.

On Academy expeditions our collecting equipment includes a Sears two-gallon metal sprayer outfitted with a metal "Luer lock" hypodermic adapter. We have had great success with this apparatus; injecting is quick and the continuous pressure exerted by the sprayer prevents clogging of the needle.

One needs to "customize" the end of the sprayer hose by soldering the Luer lock adapter to the end of the sprayer mechanism. Since the majority of medical facilities now use disposable, all plastic syringes, the Luer lock adapter is not a common item. They can be purchased at \$5.40 each) from the Arthur H. Thomas Company, Vine Street at Third, Philadelphia, PA 19105, (215) 574-4500. To save on cost, they can also be removed from old glass syringes.

Plastic garden sprayers could probably be adapted also. These would have the advantage of not being affected by the corrosive properties of formalin. - WILLIAM G. SAUL, Academy of Natural Science, Philadelphia.

DATA ON SUPPORT OF ICHS AND HERPS COLLECTIONS AVAILABLE - A summary and detailed data on the funding by the NSF Biological Research Resources Program for the support of refurbishment and operations of ichthyological and herpetological systematic collections from 1972 (inception of BRR Program) to the end of 1981 are available. Please Contact: Dr. James C. Tyler, Division of Environmental Biology (Rm. 336), National Science Foundation, Washington, DC 20550, (202/357-7475).

PRELIMINARY BIBLIOGRAPHY ON PREPARATION AND CURATION OF HERPETOLOGICAL SPECIMENS - John E. Simmons, Museum of Natural History, University of Kansas, Lawrence.

The following is a bibliography of preparation and curation techniques of interest to herpetologists. It was compiled by checking Zoological Record, the current literature sections of Herpetological Review (from 1971 to present), the Association of Systematic Collections Newsletter, Curator, and Turtox News. Older literature was not searched as thoroughly as the more recent, but an attempt was made to list papers of historical significance.

Additions and corrections are requested for a future publication of a revised bibliography.

Altig, R. 1975. Freeze-drying anuran tadpoles for taxonomic examinations. Herpetol. Rev., 6(1): 13.

Anderson, S. 1976. Mock turtle - random harvest. Curator, 9(2): 123-129.

Andrews, C. 1978. Parasitological techniques in herpetology; relaxation and fixation of parasitic metazoans. British .J. Herpetol., 5(10) : 735-739.

Anonymous. 1975. Recommendations for the management of herpetological museum collections. Herpetol. Rev., 6(2):34-36.

Anonymous. 1976. Fumigants... procedures, precautions and institutional responsibility for their safe use. ASC Newsletter, 4(1): 5-6.

Anonymous. 1976. Compactors: one solution to the problem of collection growth. ASC Newsletter, 4(2): 20-22.

Applegarth, J. S. 1977. How to prepare an articulated snake skeleton. Colo. Herpetol., 3(1) : 6-10.

Baker, R.J., J. Bull, and G.A. Mengden. 1971. Chromosomes of Elaphe subocularis, with a description of an in vivo technique for preparation of snake chromosomes. Experientia, 27: 1228-1229.

Barco, S. 1976. Preserving your collection. St. Louis Herpetol. Soc. Newsl., 3(9-10): 11-14. Bea, A 1979. Metodo rapido de preparacion de tezticulo e anfibios y reptiles. Publ. Dept. Zool. (Univ. Barcelona), IV: 69-70.

Beebe, W. 1947. Snake skins and color. Copeia, 1947(3): Z05-206.

Bell, R. 1977. The museum preparation of herpetological specimens. Cotswold Herpetol. Symp. Report, 3:2_8.

Bogart, J.P. 1968. Chromosome number difference in the amphibian genus Bufo: the Bufo regularis species group. Evolution, ____ 22: 42-45.

Bragg, A.N. 1949. Field preservation of amphibian eggs and larvae. Turtox News, 27(12):262-263.

Branch, W.R. 1978. A technique for the collection of serological and chromosomal material from small reptiles. Herpetol. Rev., 9(3):91-92

Branch, W.R. and E.O.Z. Wade. 1976. Hemipenal morphology of British snakes. British J. Herpet., $5(7):548_553$.

Brazenor, C.W. and G. Kaye. 1953. Anaesthesia for reptiles.

Copeia, 1953(3): 165-170.

Buchanan, N. 1969. A method Or extracting tritrichomonads from toads without sacrificing the host. Turtox News, 47(2):70.

Bush, M. and J. Smeller. 1978. Blood collecting techniques in snakes. Vet. Med. Small Anim. Clin., ?3(2): 211-215.

Colbert, E.H. 1961. Inexpensive racks for the storage of large specimens. Curator, 4(4): 368-370.

Cole, C.J. and C.R. Leavens. 1971. Chromosome preparation-z of amphibians and reptiles: improved technique. Herpetol. Rev., 3: T-102.

Congdon, J.D., L.J. Vitt, J.E. Platz, and A.C. Hulse. 1975. A portable rapid injector for preserving fish, amphibians, and reptile specimens in the field. Copeia, 1975(1):183.

Cook, F.R. 1965. Collecting and preserving amphibians and reptiles. In: Methods of collecting and preserving vertebrate animals (R.M. Anderson, ed.), pp. 128-151. Nat. Mus. Canada Bull. No. 69. Biol. Ser: 1-199.

Dietrich, S.F. 1975. A practical means of preservation. St. Louis Herp. Soc. Newql., 2(1):2-4.

Dowler, R.C. and H.H. Genoways. 1976. Supplies and suppliers for vertebrate collections. Museology, Texas Tech University No. 4. 83 pp.

Dubois, E.P. 1942. Technique for sectioning small skulls. Copeia, 1942(1) :55-56.

Dudley, D. H. and I. B. Wilkinson. 1980. Museum registration methods. American Association of Museums. ix + 437~p.

Duellman, W.E. 1962. Directions for preserving amphibians and reptiles. In: Collecting and preparating study specimens of vertebrates (E.R. Hall, ed.), pp. 37-40. Univ. Kans. Mus. Nat. Hist. Misc. Pub., 30: 1-46.

Duellman, W.E., T. Fritts, and A.E. Leviton. 1978. Museum acronyms. Herpetol. Rev., 9(1):5-9.

Elkan, E. 1970. Embalming frogs. Brit. J. Herp., 4(6) :155-156.

Feldman, J. 1980. A technique for preparing a turtle shell for display. Bull. Chicago Herp. Soc. 15(4): 111.

Fever, J.F. and R.C. Fever. 1975. Indexing reprints with computer cards. Bull. Phila. Herp. Soc., 23 : 3-7.

Fink, W.L., K.E. Hartel, W.G. Saul, E.M. Koon, and E.O. Wiley. 1979. A report on current supplies and practices used in curation of Ichthyological collections. ASIH ad hoc subcommittee report, 63 pp.

Gloyd, H.K. 1938. Methods of preserving and labeling amphibians and reptiles for scientific study. Turtox News 16: 19-53 66-67.

Gorzula, S., C.L. Arocha-Pinango, and C. Salazar. 1976. A method of obtaining blood by venipuncture from large reptiles. Copeia, 1976(4) : 838-839.

Guerra, L.A. 1976. Color preservation in salamanders. Herpetol. **Rev.**, 7(4): 170-171. Hall, E.R. and W.C. Russell. 1933. Dermestid beetles as an aid in cleaning bones. J. Mamm., 14(4): 372-374. Hardaway, T.E. and K.L. Williams. 1975. A procedure for double staining cartilage and bone. Brit. J. Herp., 5(4):473-474. Hower, R.O. 1967. The freeze-dry preservation of biological specimens. Proc. U.S. Nat. Mus., 119(3549):1-24. Huheey, J.E. 1963. Concerning the use of paraformal dehyde as a field preservative. Copeia, 1963(1): 192-193. Jackson, M.K. 1971. A new "syringe" for injecting herptiles. Herpetol. Rev., 3(4) :75. The construction of a tortoise measuring Jackson, 0. F. 1980. device. Testudo, 1(z): 20-21. Johnson, J. A. and B. J. Parker. 1980. An effective method of preserving large reptiles. Herpetol. Rev., $11(3):77_78$. Johnson, T. R. 1975. Preserving your amphibians and reptiles. Louis Herp. Soc. Newsl., 2(4): 10-12. St. Juszczyk, W. 1952. The preservation of natural colors in skin preparations of certain amphibians. Copeia 1952(1):33-38. Kaplan, H. M. and R. Taylor. 1957. Anesthesia in turtles. Herpetologica, 13(1): 43-45. Kincaid, T. 1948. To preserve the color pattern of the skin in frogs. Turtox News, 26:50-51. Koeppl, J.W., R.S. Hoffman, and W.E. Dullman. 1979. data retrieval and biogeographic distribution maps. **Computerized** ASC Newsletter, 7(1): 6-8. Kortlucke, S. 1979. Problems with self-carbonized forms. Newsletter, 9(2):34. ASC Kretzschmar, K.M. and D.R. Wilkie. 1969. A new approach to freezing tissues rapidly. J. Physiol. (Cambridge), 202(2):66P-67P. Lambert, L. R. 1967. 'Anecti Herpetologica, 23(2):135-136. 'Anectine': a herpetological killing agent. Lambiris, A. J. L. 1971. An experimental technique for staining and clearing frogs. J. Herpetol. Ass. Afr., (7):23. Lambiris, A.J.L. 1979. Recording of ecological data in herpetology. J. Herpetol. Ass. Afr., (21):11-18. Lee, M.R. 1969. A widely applicable technic for direct processing of bone marrow for chromosomes of vertebrates. Stain Technol., 44(3):155-158. Legler, J.M. 1977. Stomach flushing: a technique for chelonian dietary studies. Herpetologica, 33(3): 281-284. Legler, J.M. 1981. Inexpensive containers for large

herpetological specimens. Herpetol. Rev., 12(1):9-10.

Legler, J. M. and L. J. Sullivan. 1979. The application of stomach-flushing to lizards and anurans. Herpetologica, 35(2):107-110.

Leitao de Araujo, M. and M.L.M. Alves. 1976. Os repteis: modos de preparacao em museus e scolares. Iheringia (Divulg.) No. 5:81-107.

Livezey, R. L. 1958. Procaine hydrochloride as a killing agent or reptiles and amphibians. Herpetologica, 13(4): 280.

Loveridge, A. 1952. Toward reducing cost in mailing reptiles. Copeia, 1952(4):280.

Lowe, C. H. Jr. 1956. Nembutal as a killing agent for amphibians and reptiles. Copeia, 1956(2):126.

MacLean, G.S., A.K. Lee, and K.J. Wilson. 1973. A simple method of obtaining blood from lizards. Copeia. 1973(2):338-339.

MacMachon, J.A. 1961. A technique for the preparation of turtle shells. Herpetologica 17(2):139.

Maslin, T.P. and L.E. Swenson. 1971. A field kit for processing and storing amphibians and reptiles. J. Herpetol., 5(3-4):179-181.

Mayer, E. and R. Goodwin. 19 . Biological materials. Part I. Preserved materials and museum collections. Biology Council, Division of Biology and Agriculture, Publ. 399. National Academy of Sciences - National Research Council, 20 pp.

Mobley, W.T. 1972. Notes on preserving snake skins. Ky. Herpetol., $3(6):3_4$.

Museum Services Group. 1977. Museum sourcebook. Museum Services Group, Charlotte, North Carolina.

Myers, G.S. 1956. Brief directions for preserving and shipping specimens of fishes, amphibians, and reptiles. Circular Number 5, Natural History Museum of Stanford University.

Necker, W.L. 1940. Short directions for preserving reptiles and amphibians. Chicago Acad. Sci. Leaflet 15, 2 pp.

Neill, W.T. 1950. How to preserve reptiles and amphibians for scientific study. Ross Allen Reptile Inst. Spec. Pub. No. 2, 15 pp. Silver Springs, Florida.

Nelson, C.E. 1971. Effects of differential preservation on dermal pustularity of the microhylid frogs Gastrophryne and Hypopachus. Herpetol. Rev., 3(5):93-94.

Ossian, C.R. 1970. Preparation of disarticulated skeletons using enzyme-based laundry "pre-soakers". Copeia, 1970(1): 199-200.

Ortenburger, A.I. 1923. A method of preparing reptile penes. Copeia, 1923(119):71-73.

Palmer, W.H. 1974. Inexpensive jars for museum specimens. Curator, 17(4):321-324.

Paranjape, S.Y. and L. Mulherkar. 1979. A modification to the

news04 method for preparing dried skins of anurans. British J. Herp., 12(5): 855-856.Patterson, R. and B. H. Brattstrom. 1971. Preparing herps skeletons. Am. Biol. Teacher, 33: 554. Peden, A.E. 1980. Preservation evaporation in bottled collections. ASC Newsletter, 8(6):84. Pisani, G.R. 1973. A guide to preservation techniques for amphibians and reptiles. SSAR Misc. Publ. Herp. Circular No. 1, 22 pp. Rhodin, S.D., P.G. Haneline, and A.G.J. Rhodin. 1976. Skeletal preparation of herpetological specimens. Herpetol. Rev., 7(4):169-170Riemer, W.J. 1954. Formulation of locality data. Systematic Zool., 3(3):138-140. Robbins, L. 1976. Embedding reptiles in plastic. Herp. (Bull. N. Y. Herp. Soc.), 11(3-4):23-26. Rubio, M.V. 1968. On the contents and methods of recording field notes. Herp. (Bull. N.Y. Herp. Soc.), 4(5):13-18. Russell, W.C. 1947. Biology of the dermestid beetle with reference to skull cleaning. J. Mamm., ,28(3):284-287. Sanders, 0. 1953. A rapid method for preparing skeletons from preserved salientia. Herpetologica, 9(1):48. Schueler, F.W. 1981. Preserving anuran skins by drying. Herpetol. Rev., 12(1):10-11. Sellers, J.C., S.E. Trauth, and L.C. Wit. 1980. A method of caudal blood collection in lizards. J. Herpetol., 14(2):185-187. Slevin, J.R. 1927. The making of a scientific collection of reptiles and amphibians. Proc. Cal. Acad. Sci., 16(9):231-259. Slevin, J.R. 1931. A tank designed to overcome the difficulties met with in making a collection of alcoholics. Mus. News, 8(17):12. Smith, H. M. 1955. Effect of preservatives upon pattern in a Mexican garter snake. Herpetologica, 11(3): 165-168. Smith, R. M. 1975. A case for field notes from life. Bull. Maryland Herp. Soc., 11(1):8-13. Snyder, J.O. 1915. Chloretone, a killing agent. Copeia, 1915(25): 63-64.Sommer, H.G. and S. Anderson. 1974. Cleaning skeletons with dermestid beetles - two refinements in the method. Curator, 17(4):290-298. Sooter, C.A. 1955. Technique for bleeding snakes by cardiac puncture. Copeia, 1955(3): 254-255. Steffan, W.A. 1977. Collection management practices for increased user accessibility. ASC Newsletter, 5(6):65-67.

Records and records management. Sutton, J. F. 1980. ASC Newsletter, 8(5):75. Taub, A. M. 1962. The use of paraformal dehyde as a field preservative. Copeia, 1962(1):209-210. Taylor R. and R. Balanos. 1975. Descripcion de un metodo simple y economico para el estudio de cariotipos en serpentes. Rev. Blol. Trop., 23: 177-183. Taylor, W.R. 1967. An enzyme method of clearing and staining small vertebrates. Proc. U.S. Nat. Mus., 122(3596):1-17. Tiemeier, O.W. 1940. The dermestid method of cleaning skeletons. Univ. Kans. Sci. Bull , 26(10):377-383. Turner, F.B. 1961. The use of anuran skins and skeletons. Turtox News. 39(1): 38-zq. Van Dijk, D.E. 1980. Anurans, authors, assessments and accessions. J. Herp. Ass. Afr., (24): 26-30. Vorhies, C.T. 1948. A chest for dermestid cleaning of skulls. J. Mamm., 29(2):18-8-189. Vosmaas, M.G. and P. Zwart. 1976. Technique for intravenous injection in the red-eared turtle (Pseudemys scripta elegans). Lab. Anim., 10(4): 399-402. Wagstaffe, R. and J. H. Fidler (eds.). 1968. The preservation of natural history specimens. Volume 2. Vertebrates, Botany, and 1968. The preservation of Geology. xv+404 pp. Philosophical Library, Inc., N.Y. Wassersug, R. J. 1976. A procedure for differential staining oz cartilage and bone in whole formalin-fixed vertebrates. Stain Technol ogy, 51(2):131-134. Webber, P. 1978. Alizarin staining techniques (with special reference to reptiles and amphibians). Herpetofauna, 9(2):2-7. White, D.A. and E.J. Peters. 1969. A method of preserving color in aquatic vertebrates and invertebrates. Turtox News, 47(9): 296-297. Windsor, D.A. 1971. Ammonium sulfate as a preservative which does not remove color from frog. Copeia, 1971(2): 356-357. Zug, C.R. and R.I. Crombie. 1970. Modifications of the Taylor enzyme method of clearing and staining for amphibians and reptiles. Herpetol. Rev., 3(2):49-50. Zweifel, R.G. 1966. Guidelines for the care of a herpetological collection. Curator, 9(1):24-35. ALCOHOL RECYCLING AND TOPPING OFF - I would like to suggest an economic compromise which might also solve topping-off problems. We have been gradually increasing the strength of the alcohol in our collection and I think the process our volunteers use could be applied to the problems discussed on pages 36-7 of the ASIH Curation Report (Fink et al, 1979). Jars of specimens with their labels are carefully drained of-alcohol through a sieve into a 5-gallon container. When the container is about 3/4 full, a small

news04

amount of 99% alcohol is added, stirred, and checked with a hydrometer. If the percentage is low, the process is repeated until correct. When the mixture reaches the correct percentage, it is transferred into a carboy for general use refilling jars or topping off. In this way the old and new alcohol is thoroughly stirred, all jars contain a reasonably uniform solution, and clear, light alcohol is recycled providing some economy. Establishing a routine for merely topping off could be set up the same way, requiring smaller quantities of 99% alcohol and fewer 5-gallon reservoir containers. - CAROL SCHLEIFER, American Museum of Natural History, New York.

Except where noted, this newsletter is written and compiled by the ASIH Ichthyological Committee on Curatorial Supplies and Practices and is intended for use by our membership. Comments are not to be construed as an endorsement of practices or products by ASIH. Correspondence should be addressed to: Karsten E. Hartel (Committee Chairman) or Jose Rosado MCZ, Harvard Univ., Cambridge, MA 02138: Janet Gomon, Susan Jewett or Leslie Knapp, Div. Fishes, WG-12, National Museum of Natural History, Washington D. C. 20560 William Saul, Acad. Natural sciences, Philadelphia, PA 19103; Allan Resetar, Field Museum of Natural History, Chicago, Ill. 60605; or John Simmons, Museum of Natural History Univ. of Kansas, Lawrence, KS 66045.