HERPETOLOGICAL ASSOCIATION OF AFRICA

Founded 1965

The H.A.A. is dedicated to the study and conservation of African reptiles and amphibians. Membership is open to anyone with an interest in the African herpetofauna. Members receive the Journal of the Herpetological Association of Africa (two issues per year) and the H.A.A. Newsletter (three issues per year).

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For information about H.A.A. membership, write to
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EDITORIAL

Although 1986 is well on its way for most of us I would like to make use of the opportunity to wish all the members of the H.A.A. a happy and prosperous 1986. I sincerely hope that each and every member will find the H.A.A. a worthwhile association and encourage more people to join.

When I committed myself to play editor of the Newsletter, I decided not to rely on a flow of contributions from H.A.A. members but rather to be independent. I have two methods of material collecting namely, the Search It Yourself technique and the Getting Ink On Paper, asking for contributions technique. I think the Institutional News column validate the latter technique. Concerning the first technique, I expect problems to occur from time to time, mainly because I am a research herpetologist and tend to gather more academic literature for the Newsletter. If you do not like this approach, please feel free to send me more informal news and I will be happy to publish it.

Being a keen conservationist and more frequently reading about Post Office and aircraft staff, discovering "bags of herps", I get the feeling that everyone does not share my sentiments. I give you a few statistics from "Biology of Reptiles", a small book written by I.F. Spellerberg (1982). It is estimated that trade in European reptiles has led to such a decline in populations that 47 species were in more or less immediate danger of extinction, way back in 1982. In the U.S.A., 99% of crocodile imports are destined for the pet trade. At least 28 reptile taxa are thought to have become extinct since 1600 (Honegger 1981), of which 36% were slaughtered for meat and 40% became extinct through predation or through habitat destruction.

This time of the year is permit time, for me anyway, I hope for you too!

EDITOR

SNAKES

WOLF EBERHARD ENGELMANN
FRITZ JURGEN OBST

This addition to the snake enthusiast's bookshelf introduces the most important and interesting representatives of this vast group of animals. A fully illustrated text describes their evolution, anatomy, physiology and systematic classification. Special sections discuss matters such as the history of snake catching and snake trading, snake bites and treatments, snake charming and historical lore. AVAILABLE NOW
Hardcover, 221pp, 240x270mm.

R45.00
INSTITUTIONAL NEWS

Department of Lower Vertebrates and Invertebrates
Transvaal Museum, Pretoria

Mr W.D. Haacke reports:

1. Staff
(a) “The Reptiles of the Namib desert” — an ecologically based zoogeographic study. Dealing with about 180 taxa recorded from the below 100 mm average annual rainfall zone.
(b) “The Southern Kalahari — a transition area defined by reptilian range limits”. (Follow up on a preliminary publication. See list below.)
(c) “The reptiles of Namibland”. With Dr D.G. Broadley. Proposed project in collaboration with the J.L.B. Smith Institute for Ichthyology.
(d) “Dynamics of a confined lizard population”. Seasonal fluctuations of the isolated and most southern population of Bouton’s Snake-eyed skink at Black Rock — normally consisting of less than 100 individuals. (Ongoing)
(e) “Marine Turtles of the Namib Coast with R. Loutit. "Marine Turtles of the Namib Coast” with R. Loutit.
(f) We are building up a comprehensive snake skeleton collection and plan to start with a cleared and stained lizard collection in the near future.
(g) We are also in the process of starting an external parasites collection.

2. Recent publications


HAACKE, W.D. and WESSELS, H.L. In Press. The frog/Die padda, Pretoria, HAUM.

6. Popular articles


(c) The Natal Parks Board is conducting a survey of Reptiles and Amphibians in their National Parks. These specimens are sent to us for identification, verification and are housed by us. All the reptiles of the survey by T.P.A. Nature Conservation on Transvaal Reptiles, will also eventually be housed in this collection.

(d) Mrs Sebakeng is sorting the snake and lizard collections into a more usable order that regional populations of each taxon are now housed in separate jars.

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7. Other News

During a recent field trip Richard Newbery collected a series of specimens of an Afroedura species from the Wolbok which have turned out to be A. pondolia mutiploris which was last collected in 1916 although a juvenile probably of this species but unidentifiable was collected more recently in the Wolkberg. Taxonomical work on the Bradypodions is progressing well and hopefully will be written up this year. A total of seven species and two subspecies is the data is analysed. The Cordylus warreni complex has received considerable attention and will also be finalised during the year. A total of seven species and two subspecies is the likely result but this may be subject to change as the data is analysed. The Cordylus warreni complex has received considerable attention and will also be finalised during the year. A total of seven species and two subspecies is the likely result but this may be subject to change as the data is analysed. The Cordylus warreni complex has received considerable attention and will also be finalised during the year. A total of seven species and two subspecies is the likely result but this may be subject to change as the data is analysed. The Cordylus warreni complex has received considerable attention and will also be finalised during the year. A total of seven species and two subspecies is the likely result but this may be subject to change as the data is analysed. The Cordylus warreni complex has received considerable attention and will also be finalised during the year.

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In conjunction with Drs. E. MacLain (Department of Physiology, Medical School, Wits University) and Dr. M. Markus (Department of Zoology, Wits University) research into fever in Cordylus vitifer is being undertaken. All populations of Cordylus vitifer sampled so far (4), have been heavily infested with malariat parasitized (Plasmodium spp.) as well as other blood parasites such as Haemogregarine spp. and probably a host of other protozoans. These parasites as is to be expected cause extensive mortalities when these lizards are subjected to the stress of captive conditions, particularly those with a heavy parasite load. It now remains to find a plasmodium-free population to compare the thermal preferences and behaviour of these, to those heavily infected. Failing to find a population free of these parasites a group of infected animals will have to be treated with drugs to kill the parasites and initiate a colony free of the malaria. It promises to be interesting.

Department of Biological Sciences
University of Natal, Durban
Prof. J.C. Poynton reports:


3. Recent publications


POYNTON, J.C. 1985. Durban's amphibians are interesting and varied. Durban: Parks, Recreation & Beaches, Department of Durban Municipality.


1. Research project. Amphibia Zambesiaca (amphibians of the Zambesi area) by J.C. Poynton and D.G. Broadley is being prepared mainly in the Natal Museum, and is being published in the museum's Annals (see references under the University of Natal, Durban). Part 3 (Rhacophoridae and Hyperoliidae) is due to go to press in January.

4. The Natal Museum is currently receiving a large amount of amphibian material from the Natal Parks Board. The museum has no permanent curator of herpetology, but the collection is being curated by Professor Poynton, an honorary research associate of the museum.

Durban Natural History Museum
Durban
Mr. G.J. Alexander Reports:

There is no Herpetologist employed by the Durban Museum at the moment. I am filling this gap at the extent of making sure the wet collection is kept in good condition and increased in size. We are working closely with FitzSimon's Snake Park and are gaining much material from this source. Our Reptile collection has increased from approximately 500 specimens at the beginning of 1985 to a total of approximately 1 500. The amphibian collection has had a similar increase. We are in the process of checking specimen numbering and identification.

You have already been informed as to the subject of my Masters Degree (by Prof. J.C. Poynton). I am also involved with a capture, recapture project on Afroedura pondolia pondolia and Hemidactylus mabouia mabouia in the Pigeon Valley Nature Park in Durban. This project is aimed at learning something of the Biology of Afroedura pondolia pondolia and the effect that the exotic species (Hemidactylus mabouia mabouia) is having on its populations. This work should result in a publication at the end of 1986.

Natal Parks, Game and Fish preservation Board
Pietermaritzburg
Dr O. Bourquin reports:

The numbered titles are registered as research projects with the Natal Parks Board.

Turtles

1. Sea turtle population assessment

Dr G.R. Hughes

A monitoring project ongoing since 1963—has resulted in numerous publications and one Ph.D. thesis. An annual tagging and recording programme is carried out by NPB & KwaZulu. The breeding population of both loggerhead and Leatherback turtles has doubled since the inception of the programme which includes anti-poonching activities.

Crocodiles

2. Individual identification and observation of sexual specific behaviour in crocodiles

Mr. J. Fiedler-Buerk — recently registered.

3. The effects of egg-incubation temperature on sex determination in the Nile Crocodile.

Mr. J. Fiedler-Buerk — ongoing for about 6 months.

4. Identification of Crocodile nesting sites in the Hluhluwe and Umfolozi Game Reserves, with notes on incubation temperature.

D. Hartley (recently completed).

The population and breeding status of the Nile Crocodile in the Hluhluwe Game Reserve — Northern Corridor, Zululand.

D.S. Reynolds — recently registered.

In addition to this, an annual assessment of crocodile numbers, and nest site surveys is undertaken by Mr. D. Blake (St. Lucia Crocodile Centre), and KwaZulu is also doing counts at Sibayi and Kosi. A project plan is being drawn up for a monitoring programme of crocodiles in Natal, & proposals for a crocodile diet study are being considered.
Snake Assistance has been given to Ms. Toy Bodbiji in the compilation of a synopsis of biological data on the Gaboon viper. This work will hopefully be completed during 1986.

Reptiles — General

6. The distribution of wild vertebrates in Natal

Dr. O. Bourquin

Data on the distribution and habitats of amphibians and reptiles in Natal are collected as part of this project, which has been ongoing for 5 years. The object is to consolidate known records for Natal and to fill in gaps where possible by collecting, so that requirements relating to conservation of the species can be clarified. The information is to be computerised for easy access and updating. A programme has been completed and is being tested using records of “red-data” reptiles.

Any good sight records, or records of collected specimens of common or rare species will be welcome, as there are still many gaps in our knowledge of distributions.

A number of range extensions have already been established, some new species (dwarf chameleons) found, and populations of Cordy/us giganteus have been discovered.

Amphibians

Angelo Lambiris will be carrying out a project on amphibian distributions and conservation issues — this project has not yet been finalized or registered, but will probably start during 1986.

FitzSimons' Snakes of Southern Africa


FitzSimons' Snakes of Southern Africa is the definitive study of the 145 species and subspecies of snakes known to occur in the southern African subcontinent, i.e. south of a line drawn from the Zambezi River in the east to the Keurse River in the west. When first published in 1961, Snakes of Southern Africa represented practically a lifetime of work by South Africa's greatest authority on herpetology, the late Dr Vivian F. M. FitzSimons. In the more than twenty years since then, numerous taxonomic changes have been made, including the description of twenty new forms and the relegation of ten others to synonymy, while many new locality records have helped to clarify the distributions of poorly known taxa. Dr Donald G. Broadley, who assisted with the preparation of the first edition, has revised and updated the entire book, which now includes 177 drawings illustrating details of head scaling, 92 photographs, 83 distribution maps and 81 colour plates of original watercolours by the eminent animal artist, the late Dr P. J. Smith. A new chapter on venom and the treatment of snakebite has been provided by Dr P. A. Christiansen, consultant at the South African Institute for Medical Research. A full description of every form is provided, together with synoptic keys, bibliography, field notes and details of colour, size and distribution. The introduction provides the necessary background for the layman and the bibliography covers the relevant literature up to 1982. A general map supplements the distribution maps with geographical details and place-names.

Vivian F. M. FitzSimons (1901—1975) was one of a family of pioneers in South African herpetology. His father, F.W. FitzSimons, was an internationally renowned zoologist and botanist who founded and edited the first edition of South African Flora and Fauna, and was curator of the Transvaal Museum in Pretoria for 30 years. His brother, D.C. FitzSimons, was the founder and owner of the Durban Snake Park, the first in Africa, in 1918, while his other brother, Vivian F. M. FitzSimons, was the founder and curator of the Durban Snake Park. He joined the staff of the Transvaal Museum in 1924, obtained his D.Sc. in zoology at the University of the Witwatersrand in 1942, and became Director of the Transvaal Museum in 1946. He retired in 1966 and in 1968 was awarded a D.Sc. honoris causa by Rhodes University.

Donald G. Broadley is Curator of Herpetology and Senior Curator of the National Museum and Monuments of Zimbabwe in Bulawayo. He obtained his M.Sc. and Ph.D. from the University of Natal in African reptiles. His major current project is Reptiles Zambesienses, a taxonomic and zoogeographical study of the reptiles of Botswana, Zimbabwe, Zambia, Malawi and Mozambique.

Delta Books
Johannesburg

SAN ANTONIO, TEXAS
JUNE 25-28, 1986

CALL FOR PAPERS

All amateur and professional herpetologists are invited to submit for consideration the titles of papers they wish to present at the 10th International Symposium on Captive Propagation and Husbandry to be held at the El Tropicano Hotel along the River in San Antonio, Texas. Time allotted for papers is 30 minutes. A preliminary program will be established by January 25, 1986 so a 100-150 word abstract of a presentation should be submitted by contributors prior to January 11, 1986. Final manuscripts should be submitted prior to June 12, 1986. Submit all program information to: Mike Bungardner, Department of Wildlife and Fisheries Biology, University of California, Davis, California 95616; (916) 752-8924. Symposium Coordinator is Randall Gray, P.O. Box 1850, Chisle, Arizona 86503; (602) 674-5265. Symposium Series Director is Richard A. Hahn, Zoological Consortium, Inc., 13019 Catoctin Furnace Road, Thurmont, Maryland 21788; (301) 662-0328. Program Committee members are Karl Peterson, 1513 Outerbelt Drive, Houston, Texas 77030; (713) 520-3226 and Sean McKown, Roeding Park Zoo, 894 West Belmont Avenue, Fresno, California 93728; (209) 488-1096. Host Committee members are Joseph Laszlo, San Antonio Zoo, 3903 North St. Mary's Street, San Antonio, Texas 78212; (512) 734-7183; Jim Seippel, Greater San Antonio Herpetological Society, 9708 Braes Valley Street, Austin, Texas 78729; (512) 258-8584 and Tom Vermersch, Greater San Antonio Herpetological Society, 3130 Waurika Street, San Antonio, Texas 78223. European liaison is Quentin Buxom, Jersey Wildlife Preservation Trust, Channel Islands, Great Britain 0534 61949. Australian liaison is Chris B. Banks, Department of Herpetology, Royal Melbourne Zoological Gardens, P.O. Box 74, Parkville, Victoria 3052, Australia; (03) 347-1522.
The dates mentioned on the cover and on the title pages are only those on which the issue should have appeared. However, they were published late, due to the circumstances outlined above. They were printed in November 1984 and were sent to the printer in Wiesbaden to the new publisher on November 12, 1984. Due to customs, they only arrived in Leiden on November 20, 1984 (coinciding with a meeting of the publisher, the Council and the General Secretary). Thus, a specimen of each issue arrived in the Rijksmuseum van Natuurlijke Historie, Leiden on November 20, 1984. The Treasurer (Dr. H. Wernicz) kindly received some early copies of the issues on November 7, 1984. Also, several authors in Germany by November 9, 1984, already had reprints in their possession, which were mailed by the printer probably on November 12, 1984. Distribution by mail of both issues to members of SEH (not to subscribers) was on December 7, 1984. This complicated history does not exactly amplify the documentation of priorities and such, but at least decisions can be taken on this basis.

With this (vol. 4 (2)) issue of "Amphibia-Reptilia," completely produced by our new publisher Brill in Leiden, we hope to resume a regular pattern of publication. As soon as we are up to date, publication will be in the months February, May, August and November.

This notice also gives me an opportunity to remind you of the fact that vol. 4 (1), which should have been distributed by our former publisher, was not sent to all members who paid their dues for 1983. Despite several reprints I sent out to all members in the past year, asking them to notify Council when they had not received vol. 4 (1), it turns out that not everybody did at that time and we are still receiving complaints. Thus, if you did pay your dues for 1983 and yet did not receive vol. 4 (1), please inform me as soon as possible (in writing) and I will take care that you receive it. After December 31, 1985 complaints no longer can be taken into account.

Formerly, SEH members could purchase back-issues of "Amphibia-Reptilia" by paying the regular membership fees for the year(s) concerned. Since E. J. Brill, Leiden, our new publisher, now has taken over all assets and actually also some of the liabilities, printing (of vol. 4 (2) and 5 (1)) of the former publisher, a new regulation has come into force on January 1, 1985. Back-issues can only be obtained from the publisher, without any indication of SEH. All members interested in buying back-issues consequently should contact the publisher at the following address:

E. J. Brill - P.O.B. 9000 - 2300 PA Leiden - The Netherlands

Due to the bankruptcy of the former publisher of "Amphibia-Reptilia," the production of Vol. 4 (2-4) and 5 (1) has been seriously hampered. Because of financial uncertainties of the former publisher a type-setting firm in Wiesbaden that had not been met, the typesetting was discontinued. The Editor-in-Chief of "Amphibia-Reptilia" and the Board of SEH were informed by the type-setting firm of this situation. It was agreed that type-setting should be undertaken at another type-setting firm in Leiden, which had not been met, the type-plates were at last handed over to the First Editor. At that moment it was discovered that there still remained a number of errors, but as time was pressing, new corrections could not correct the plates, it was deemed wise to go ahead and print and take the error for granted.

The Council wishes to apologize for this rather low standard of quality in these two issues, the first plus to the author, but also to the members of SEH and other readers.

We hope you can accept these apologies in the light of the difficult circumstances that have surrounded the journal the past year.

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Two reptiles among the 12 most threatened animals of the world

During its recent 16th General Assembly in Madrid IUCN, on November 14, 1984, released a list of the most threatened animals and plants of the world. This list was selected by specialists of IUCN's Species Survival Commission from an initial 'hit list' that contained 34 animals and 32 plants. All species on this hit list were selected using a specified set of criteria. The top twelve of each group were selected with the aim to direct public awareness to their precarious situation, in order to obtain top priority for conservation action and—hopefully—recovery in the wild. As Mr. Grenville Lucas, Chairman of the SSC, put it: "The animals and plants we are highlighting face many threats within these two (ill-considered and careless development, and destruction of resources) areas. They are not necessarily the most threatened—although several are on the brink of extinction. We hope they will act as standard bearers to alert the world to the grave situation facing the complex web of life on earth for which we humans are responsible". Among the 12 species of animals selected are a tortoise and a crocodile. The tortoise is threatened by destruction of its habitat, the crocodile by the hide trade. Following are short statements concerning these species as made by IUCN:

Agonoka—The Madagascan Tortoise

The angonoka Geochelone nyphera is the rarest tortoise on earth, with probably fewer than 200 specimens alive. The majority of the known specimens are in private hands in Madagascar. They are kept as pets because they are believed to clean up backyards and prevent poultry disease. In the field the number of individuals found by researchers has never exceeded 10, however long the search. An immediate species rescue programme must be started. Unfortunately no wild nests have ever been found and efforts at captive breeding have so far been almost totally unsuccessful. Only one tortoise has been bred with the help of electroejaculation and artificial insemination. The remaining habitat in the north of Madagascar is sub-optimal and the depredation of grazing animals is further reducing the area's viability for this very rare species.

The Tortoise Group of IUCN's Species Survival Commission has prepared a rescue programme involving captive breeding and habitat conservation. Members have made many visits to Madagascar in the last few years and it is now clear that, if the present captive breeding facilities there are unsuitable (a member is currently there examining the situation), a formal request will be made for some more privately-held specimens to be brought to the public domain, in order to alert them to any opportunity to reinforce the action (fundraising, research, conservation action), proposed by IUCN. On the other hand any information on action detrimental to the species should also be brought to the attention of IUCN as soon as possible.

Orinoco Crocodile

The Orinoco crocodile Crocodylus intermedius is considered critically endangered with extinction. It has been wiped out in most of its former range in the Orinoco river system in both Colombia and Venezuela by hide collectors. Only 1,000-1,500 individuals may survive of this crocodile, which was once the dominant carnivore of the Orinoco rivers. The situation is most critical in Colombia because there are fewer crocodiles left there and the Colombian Government has not made any special effort to save them, except for a weakly-enforced ban on hunting and sale of hides.

In Venezuela there are individual crocodiles scattered through a number of rivers and there are small populations in isolated areas. One population of 15-30 crocodiles was discovered last year on the Caura river, where the government has proposed building a dam. The area should be declared a wildlife refuge to protect the crocodiles and other wildlife from the hunting that will be inevitable with the arrival of construction workers.

The Venezuelan Ministerio de Ambiente y de los Recursos Naturales Renovables, and its Direccion de Informacion y Investigacion, have mounted an aggressive programme to protect the crocodiles. Hunting has been banned, and the authorities are considering the establishment of refuges and other protected areas.

The Ministerio is also assisting several private land-owners and non-governmental conservation organisations to establish captive breeding programmes. One centre has been established by Tomas Blohm and the Fundacion para la Defensa de la Naturaleza (FUDENA) on the Hato Masaguaral ranch with the Ministerio's assistance. Captive bred offspring will be used to restock rivers and wetlands, where the species can be protected.

A special effort is being made to protect the Orinoco crocodile when controlled hunting is again permitted of the spectacled caiman Caiman crocodilus after a 10-year gap. The Orinoco crocodile is a large animal, which can grow to over six metres (20 feet). It is a pale yellow-green. The narrow snout is probably an adaptation to a diet rich in fish. It accounts for the scientific name intermedius because it is between the rounded snout of the Nile crocodile (Crocodylus niloticus) and the extremely slender snout of the fish-eating Indian gharial Gavialis indicus.

It was deemed useful to inform SEH members about this IUCN action, mainly aimed at the public domain, in order to alert them to any opportunity to reinforce the action (fundraising, research, conservation action), proposed by IUCN. On the other hand any information on action detrimental to the species should also be brought to the attention of IUCN as soon as possible.

Data (positive or negative) on Geochelone nyphera should be brought to the attention of Dr. Ian Swingland, Chairman SSC Tortoise Group, c/o Ecology Research Group, Rutherford College, University of Kent, Canterbury, Kent CT2 1NX, United Kingdom.

Any data (positive or negative) on Crocodylus intermedius should be brought to the attention of Dr. F. Wayne King, Chairman SSC Crocodile Group, Florida State Museum, Gainesville, Florida 32611, U.S.A.


M. S. Hoogmoed
During a visit to London in August 1979, Jean-Paul Risch discussed with me the coordination of interests in tortoises and other chelonians in Europe on rather similar lines to the Desert Tortoise Council, California (for SW U.S.A. since 1975). This resulted in the French herpetological society on 15 and 16 May 1980 at Nancy. The First European Symposium on tortoises ('I. Symposium Cheloniologicum Europaeum') was thus appropriately held in France where three Mediterranean species are indigenous and legally protected. The Proceedings were later published in the journal of the British Chelonia Group, Testudo 2(2): 1-32, 1983.

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Background

During a visit to London in August 1979, Jean-Paul Risch discussed with me the coordination of interests in tortoises and other chelonians in Europe on rather similar lines to the Desert Tortoise Council, California (for SW U.S.A. since 1975). This resulted in the First European Symposium on tortoises ('I. Symposium Cheloniologicum Europaeum') being organised by Jean-Paul Risch, in conjunction with the Annual Meeting of the French herpetological society on 15 and 16 May 1980 at Nancy. The First European Chelonian Symposium was thus appropriately held in France where three Mediterranean species are indigenous and legally protected. The Proceedings were later published in the Bulletin de la Société Herpetologique de France, no. 19, 1981.

In 1980, the IUCN (International Union for the Conservation of Nature and Natural Resources) Species Survival Commission (SSC) founded a land tortoise specialist group with Dr. J. R. Swingland (University of Kent, Canterbury, England) as Chairman. Dr. Swingland's previous experience, while with the University of Oxford and sponsored by the Royal Society, London, includes several years' work as part of a research team on the ecology of giant tortoises (Geochelone gigantea) on Aldabra Atoll, Indian Ocean. Also during 1980, the IUCN/SSC freshwater chelonian specialist group was founded with Dr. E. O. Moll (Eastern Illinois University, Charleston, U.S.A.) as Chairman.

In Europe, 1981 saw the proliferation of multinational herpetological meetings including the Franco-Spanish Herpetological Colloquium at Jaca (Huesca), Spain, 23-31 May, the First Herpetological Conference of Specialists of the Socialist Countries (1. Conferencia Herpetológica Republicar Socialista) at Budapest, Hungary, 25-29 August; the First Ordinary General Meeting of Societas Europaea Herpetologica (SEH) at Vienna, Austria, 13-16 September (immediately followed on by the Annual Meeting of the 'Deutsche Gesellschaft für Herpetologie und Terrarienkunde' (DGHT), also in Vienna, 16-20 September), and the International Herpetological Congress at Oxford, England, 3-9 October. Largely for convenience, financial expediency and the international character of the last, together with appropriate facilities provided by the Department of Zoology, University of Oxford, it was decided to hold the 2nd European Chelonian Symposium or as part of the Congress; time, programme space and subject-matter allowing. Since English was laid down earlier by the SEH for their Meeting in Vienna and was the language of the Congress, most of the Symposium papers were read in English, although to allow for continuity following the First Symposium, papers in French and, if offered, German, were to be considered with written English summaries available for circulation. As a principle, this was generally accepted. Papers were not in any case accepted without written summaries forwarded beforehand. This helped in drawing up the programme.

British dealers have been a major, although not the only, culprit in the European bulk import trade in pet tortoises from the Mediterranean Basin (an annual average of over 150,000, 1968-78), even since the U.K. Government's 1964 Animals (Restriction of Importation) Act and CITES ratification in 1976. The acts involved have now been largely superseded by the 1981 Wildlife and Countryside Act in line with the Convention on the Conservation of European Wildlife and Natural Habitats, Berne 1979. was fortunate enough to read a paper on the conservation of Mediterranean (W. Palearctic) tortoises, as well as have discussions with SEH Council members on the question of a greater herpetological input from Britain (I would like to thank the Royal Society, London, for approving a Travel Grant from the U. K. Parliament's Grant-in-Aid to go to Vienna). During the meeting, K. A. Corbett, another BHS Council member, proposed the formation of an SEH Conservation Committee, with species mapping included in its remit, and was later accepted as Chairman.

On the strength of its own Conservation Committee's involvement with the protection of species in Britain, the BHS was approved a member of IUCN as a national Non-Governmental Organisation at the 10th IUCN Council meeting in October 1981 at Christchurch, New Zealand. Hopefully, this will also be of interest of SEH in the future.

The aims of SEH are multinational and concerned with scientific research and nature conservation, which are particularly important for southern Europe where most species of herpetofauna, including the tortoises, occur. I am therefore most grateful to the Co-Editors of Amphibia-Rana, Prof. Dr. H. Hamner and Dr. J. van Gelder, for enabling the scientific proceedings of the 2nd European Chelonian Symposium to be published in this journal. I would also like to thank Dr. R. A. Avery (BHS Editor, British Journal of Herpetology) for providing a second opinion on their editing. The more general proceedings being, including any abstracts of papers presented if published elsewhere, will be published in Testudo, the journal of the British Chelonia Group, Bristol. At this pioneering stage in the development of an interest in W. Palearctic tortoises, the papers in both Proceedings parts will hopefully pose questions, stress the lack of available information and stimulate further conservation research and field work on Mediterranean chelonians which one anticipates learning about in a 3rd Symposium! Michael R. K. Lambert
Introduction

It has become increasingly obvious that tortoise populations are being reduced or deci-
dated throughout their global distribution because of range fires, habitat destruction, and
the trade in pets. Turtles are peculiarly vulnerable to these threats being slow
moving and defenceless. In recognition of these urgent problems, the Tortoise Group
was formed as a result of the IUCN Species Survival Commission meeting in Florida
1980 and Sir Peter Scott, the then Chairman of the Commission, invited me to serve as
founder Chairman.

The Tortoise Group exists to make governments and decision-makers aware of the
need to conserve tortoises; to advise on National Red Data lists and laws for the protec-
tion of tortoise species on those lists; to encourage international agreements through
which nations can co-operate in conserving endangered species; to provide accurate,
current information concerning problems that may threaten species and an effective
information network to recognise opportunities of enhancing the status of endangered
species; to advise the Species Conservation and Wildlife Trade Monitoring Units; to
put forward specific proposals for conservation projects; and to stimulate, encourage
and help in research, extending our knowledge of these reptiles.

In order to fulfil these responsibilities, we have 22 members and over 200 correspondents
representing every country in which tortoises are found. During our inaugural me-
ing in Oxford just before the Symposium started, we discussed the conservation
problems of the European Mediterranean species, several of which are involved with
the bulk pet trade to northern Europe. Testudo hermanni, T. graeca and T. marginata, and
the other western Palaeartic species, T. kleinmanni and T. (Agrionemys) horsfieldii.

Our feelings were that both the hermanni western population and kleinmanni require
monitoring. Indeed, under my direction, a three-year research project on the ecology of
Testudo hermanni robertmenensi funded by the Natural Environment Research Coun-
cil in Britain is already underway and it is hoped to be able to produce a detailed conserva-
tion management plan applicable to most Mediterranean species populations apart
from the more exotic scientific results. The Tortoise Group hopes to encourage more
such projects elsewhere in Europe and in the World as the problems facing torto-
ises in the Mediterranean are a microcosm (and symptomatic) of what is happening elsewhere (with the addition of tortoises being used as a food source by
humans in some countries). Our greatest fear is that we are seeing a fragmentation of
populations worldwide, from our experience of other animal population trends, indi-
cates not only a reduction in numbers but a greater vulnerability to extinction.

The most often heard view at the Group meeting was "we do not know the status of this
species" and the second comment "we must find out more about the ecology of this animal
if we are to know how to conserve it in the future if it becomes necessary." The
means of conservation is knowledge; the aim, to secure the long-term survival of the species in its natural environment. We need to know much more about the distribution,
population structure and dynamics, and behaviour of both land turtles and tortoises.

Excellent field work has been done on some of the Gopherus spp. in the U.S.A., on giant
tortoises (Achodochelys spp.) on some Testudo spp. and on Emydidae ocellatus which lays a
strong foundation for future fundamental research in ecology and conserva-
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species (around the Mediterranean, for example); more basic research; the production
of management models from existing raw data on populations, greater representations
to organisations, national governments and transnational authorities (such as the
EEC and the European Parliament); the education of people living in areas inhabited by
chelonians and finally, rigid implementation of necessary conservation measures.

The Second European Symposium is the culmination of a wide area of tortoise research. I am
sure it will be of great interest and most stimulating. I expect everyone will enjoy the
occasion, both scientifically and socially, and hope to receive any complaints about the
repeting at another venue and at regular intervals. Our thanks to Dr Michael Lasser and
M. Jean Paul Risser for organising this meeting.

It was once said by a colleague of mine that the ultimate form of "non-empiricism" for an
animal ecologist was to have studied an extinct species. I sincerely hope we shall nev-
 er be able to make such a boast!

December 1981

Dr Ian R. Swingland

(Chairman, IUCN Species Survival Commission Tortoise Group)

University of Kent, Canterbury, U.K.

*A report of this meeting is available from Dr Swingland.
ABSTRACTS

Preliminary Observations on the Ecology of the angulate Tortoise (Chersina angulata) in the Eastern Cape Province, South Africa

W.R. Branch

Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa. This paper was read at the 2nd European chelonian Symposium by Dr. M.R.R. Lambert.

Abstract. The ecology of the angulate tortoise, Chersina angulata SCHWIEGGER, has been studied using mark-recapture techniques, on a 100 ha farm near Port Elizabeth, Eastern Cape Province, South Africa. Biometrical parameters of sexual dimorphism are analysed, and preliminary estimates of growth, home range and density given. Temperature recordings from wild, active and sedentary tortoises indicated a preferred maximum temperature of 28-32°C.


Conservation Status of South African Land Tortoises, with Special Reference to the Geometric Tortoise (Psammobates geometricus)

J.C. Greig

Cape Department of Nature and Environmental Conservation, Jonkershoek Nature Conservation Station, Private Bag 5014, Stellenbosch, 7600, South Africa.

Present address: Editor, ‘African Wildlife’, 55 Reitz Street, Somerset West, 7130, South Africa. This paper was read at the 2nd European Chelonian Symposium by Dr. I.R. Swingland.

The geometric tortoise, Psammobates geometricus (L.), is one of eleven South African species. It is confined to the south-west Cape region. A 7.5 ha private nature reserve established in 1973 north of Paarl hold the largest surviving population.


Description of a new species of Afroedura (Loveridge) Reptilia: Gekkonidae) from the south-western Cape

P. le F.N. Mouton and D.P. Mostert

A new gekkonid species, Afroedura hawequensis, is described from the south-western Cape (South Africa). The three species groups recognized in the genus are discussed.


WORLD CONGRESS OF HERPETOLOGY

Planning for the First World Congress of Herpetology is proceeding on schedule. The Executive Committee, an international group of 12 persons, and the recently-elected 30-member International Herpetological Committee are now evaluating the criteria to be used in choosing a site and date, and discussing the formal and content of the Congress. It is our plan to organize a Congress to be held in about 6 years that will be accessible to and of interest to all persons who study amphibians and reptiles. Potential hosts should contact the Executive Secretary General, Cornell University, Ithaca, N.Y. 14853, U.S.A.


INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

The following opinion have been published by the International Commission on Zoological Nomenclature in the Bulletin of Zoological Nomenclature, Volume 42(4), December 1985.

AMPHIBIAN SPECIES OF THE WORLD

A TAXONOMIC AND GEOGRAPHICAL REFERENCE

To the nomenclature and distribution of amphibians...

Copublished by: Allen Press, Inc.

The Association of Systematics Collections

C/o Museum of Natural History

University of Kansas

Lawrence, Kansas 66045 USA

Edited by Darrel R. Frost

PUBLICATIONS

BULBUNG—(1) Under the plenary powers the generic name Eremophila: Fitzinger, 1843, is hereby suppressed for the purposes of the Principle of Priority but for those of the Principle of Homonymy.

(2) The generic name Hylomedusa Daudin, 1853 (gender: masculine), type species by monotypy, Hylomedusa maculata Daudin, 1853, is hereby placed on the official List of Generic Names in Zoology with an endorsement that it is not to be given precedence over Kassina Girard, 1851, where the two names are considered synonyms (Name Number 3257).

(3) The specific name maculata Daudin, 1853, as placed in the latter Hylomedusa maculata (specific name of the type species of Hylomedusa Daudin, 1853) is hereby placed on the official List of Specific Names in Zoology with the Name Number 1618.

(4) The generic name Eremophila: Fitzinger, 1843, as suppressed under the plenary powers in (1) above, is hereby placed on the official Index of Rejected and Invalid Generic Names in Zoology with the Name Number 2773.

HISTORY OF THE CASE Z.N.(U.S.)2343

An application for the conservation of Kassina Girard, 1853, was first received from Dr. A. Dahms and Dr. J. Morse (Museum National d’Histoire Naturelle, Paris, France) and Mr. P. A. Froson and Mr. R. T. Clarke (Field Museum of Natural History, Chicago, Ill.) on 22 May 1983. After initial correspondence, a second draft was sent to the committee on 19 April 1983 and published on 15 July 1983 in Bulletin of Zoological Nomenclature, vol. 40, pp. 114-115. A public notice of the possible use of the plenary powers was given in the same part of the Bulletin as well as to the statutory serials, to seven herpetological serials, a supportive comment was received from Dr. M. M. Smith (University of Connecticut, U.S.A.). No adverse comments were received.

DECISION OF THE COMMITTEE


Last affirmative votes were received from: Cooper and Stoecklberger.

ORIGINAL REFERENCES

The following are the original references for the names placed on Official Lists and as Official Rulings in the present Opinion: Eremophila: Fitzinger, 1843, Systema Reptilium, p. 12; Hylomedusa Daudin, 1853, Ann. Soc. nat. (Zool.), vol. 19, p. 162; Hylomedusa ducardi, 1853, ibid., p. 165.

CERTIFICATE

I hereby certify that theSpecimen listed on Voting Paper (1835)22 was cast as set out above, that the proposal considered in that Voting Paper have been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1364.

R. V. MELVILLE

Secretary

25 International Commission on Zoological Nomenclature

London

July 1985

Association of Systematics Collections

C/o Museum of Natural History

University of Kansas

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Bulletin of Zoological Nomenclature

Vol. 40, No. 4, December 1985

12 August 1983
Operation Tortoise

Purpose: To determine the status and examine the comparative ecology of many of the world's species of tortoise for the purposes of conservation.

The Tortoise Specialist Group of the IUCN Species Survival Commission was set up in 1982 to provide an action plan for ecological research and the worldwide conservation of tortoises. Although two major single-species studies in Europe and Asia have been successfully funded, there are considerable gaps in our knowledge of the status, distribution and ecology of the 79 species which will survive without even the basic information on some species is impossible to formulate effective conservation plans.

OPERATION TORTOISE is planned as a 4-year project to study tortoise species around the world. It is to take place in association (where possible) with "Operation Kangaroo," a multi-national expedition headed by HRH The Prince of Wales, which will supply some logistic support and additional manpower, thereby minimizing the budget.

The project will involve tortoise ecologists in a large number of countries who specialize in tortoise ecology and behavior and will also provide opportunities for a large number of young people to become involved with field-work, on tasks ranging from general prospecting in search of tortoise populations, to detailed observations focused on individual animals.

The work can be carried out exactly in the field with only a modest amount of equipment and is not dependent on major back-up facilities. The methods have been used successfully on previous single species studies, including expeditions, and have provided rigorous data suitable for publication. Research will be carried out in the same manner at each site visited so that data will be directly comparable between sites and with existing data sets for European and other species.

Many of the species to be studied are endangered and populations are being decimated each year by fire, deforestation, poaching, and introduction of non-native species. Comparative studies should enable the development of common threats for the conservation of several species.

The Ecology Group at the University of Kent will be the coordinating base and data bank for OPERATION TORTOISE and all results will be published by the participants both in the form of scientific papers and as reports to conservation bodies and the governments concerned.

A few of the study species

- Geh校lois quinquenotatus (Ascupied Tortoise): restricted to forest areas in the vicinity of Bally Bay, north-western Madagascar.
- "The same species as earth... requiring immediate conservation measures" (Sir Peter Scott, 1983). STATUS ENDANGERED.
- Geh校lois sp.: (Boleus tortoise): occurs in the Boleus Grass ecosystem, Mozambique. "It is nearing extinction and a research project is the only hope for its survival" (Prof. Herbert Smith, University of Colorado, 1982). STATUS ENDANGERED.
- Testudo sulcata (Pied-Pebble box tortoise): found only in one small location near Pedro Pablo, Mexico. "Little is anything known about this species" (Dr. Peter Pritchard, Florida Audubon Society, 1981). STATUS RARE.
- Geh校lois stagnalis (Giant Galapagos tortoise): a recent review of the various island populations on the Galapagos archipelago is needed. The last census was carried out over ten years ago so that a large number of new and unusual nesting programs have been executed and the effects of the captive breeding/treasured nesting programs should be measurable. "An island that Charles Darwin saw and used it to thinking on the Origin of Species" (Andrew Minter, Scientific Coordinator). "Operation Kangaroo." STATUS ENDANGERED.
- Geh校lois nigra (Kathmandu tortoise): another endemic species, restricted to Deldia forest across eastern Madagascar. "An initial consignment of these tortoises was found in Hong Kong and has been returned to Jersey to establish the setting up of breeding groups" (Jervis Mallinson, Jersey Wildlife Preservation Society, 1982). STATUS VULNERABLE.

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Operation Tortoise

Phase 1: CENTRAL AND SOUTH AMERICA
February, 1983 - January, 1984
Phase 2: SOUTH-EAST ASIA AND INDIA
January, 1985 - November, 1985
Phase 3: AFRICA, ALDABRA, AND MADAGASCAR
January, 1986 - December, 1986

Operation Tortoise sponsorship fund
A proportion of the funding for this project will be generated by the individual scientist undertaking particular phases of the project in the form of grants for scientific research and conservation. However, this will not raise a substantial amount to be raised. The estimated funding required for each phase is as follows:

Phase 1: £15,000
Phase 2: £6,000
Phase 3: £5,000
Total funding requirement by early 1985 = £30,000
Total funding requirement by late 1985 = £45,000

If sufficient sponsorship is obtained it will be possible to employ a full-time, or possibly part-time, field officer. This would ensure that all the proposed fieldwork is carried out and would provide a greater degree of on-ground cohesiveness. The funds required for this would be in the region of £30,000, 000.

All donations or sponsorships will go directly to supporting people in the field.

An authoritative new reference work from Humana Press...

**Amphibian Morphogenesis**

**Guest Editor: R. Martin**

**Morphogenesis in a Nutshell**

**An amphibian's morphogenesis in a Nutshell and a glimpse into the molecular and modern molecular biology that moves the discipline from the amorphous to the cellular"**

**Shelley Brown, University of London**

**A new approach to the history of modern biology - most recently co-authored in the new approach to the history of modern biology - most recently co-authored by the author of this book.**

**Author's Note**

**This book is a comprehensive guide to modern biology, including a full overview of the history of modern biology and its implications for the future.**

**Yours sincerely,**

**E U Denis**

**Curator of Reptiles and Birds**

**Keeper-In-Charge**

As you may be aware, Melbourne ZOO's Reptile Department was successful in reproducing Araunara File snakes (Araunara australis) in 1983 and again in 1985. Although the young snakes were raised without difficulty, an infection developed amongst the first litter late in 1986. This appeared to be fungal in origin and subsequently led to the death of a number of the young despite a range of treatments. A similar problem arose with the second litter but first appeared when they were only three months of age.

The parent snakes are still in the collection and further breeding is anticipated in late 1985/early 1986. In order to avoid further problems, we are seeking your assistance through the attached questionnaire. Should the results prove of value, they will be published and all respondents will receive a copy of the printed paper.

Yours sincerely,

**C B Rams**

**Keeper-In-Charge**
The 7th working meeting of the IUCN Survival Service Commission’s Crocodile Specialists Group (CSG) was held in Caracas, Venezuela 21 to 28 October, 1984. Hosted by Cecilia de Blohm, Director of the crocodilian conservation program of Venezuela’s FUDENA (Fundacion para la Defensa de la Naturaleza), the meeting had over 75 participants representing 15 countries. The four days of meetings consisted of presentations of the present status of wild crocodilians, management programs for wild and captive crocodilians, and new developments in crocodilian research, as well as the working session of the CSG.

Research on crocodilians in Venezuela was well represented with the entire first day of meetings devoted to presentations by Venezuelan scientists. Andres Eloy Seijas discussed the status and distribution of Crocodylus acutus and Caiman crocodilus in coastal Venezuela. The status and ecology of Caiman, and Paleosuchus in the Venezuelan Guyana was summarized by Stefan Gorzula. Carlos Rivero Blanco remarked on methods of censusing “babas” (Caiman crocodilus) and on baba ecology as well as reviewing the history of crocodilian research in Venezuela. Other presentations by Venezuelan researchers included censuses of Crocodylus intermedius, notes on growth and disease in babas, buccal morphology and feeding in crocodilians, and an explanation of the wildlife policies regarding the experimental exploitation of Caiman crocodilus in the Venezuelan Llanos.

International presentations included African reviews of the status of Crocodylus niloticus in Zimbabwe by David Blake, and in Botswana, Mozambique, and Malawi by Kevin van Jaarsveld. Australian crocodile research was well represented with eight participants at the meetings. Harry Messel and George Vorlicek reviewed ten-years of research on crocodilian population dynamics and management strategies by William Magnusson, and a review of crocodile conservation in Mexico by Marco Lascano-Barrero. Reports on research of Alligator mississippiensis in the United States included reviews of alligator status, management, reproduction, and behavior. Ginette Hemley of TRAFFIC/US presented data on international trade in crocodilian hides. Richard Choudhury, of IUCN’s Conservation Monitoring Centre, summarized results of a worldwide survey of crocodilian farms.

Items discussed during the business meeting included CSG’s support of Australia’s proposal to CITES for the downlisting of Crocodylus porosus in Australia from Appendix I to Appendix II. The CSG could not endorse a similar proposal for the transfer of Crocodylus niloticus from Appendix I to Appendix II of CITES proposed by 24 African countries due to lack of knowledge on the population status of crocodiles in those countries and lack of proper management plans. The CSG also could not endorse the downlisting of C. porosus in Indonesia for similar reasons. The CSG did support the commercial exploitation of Caiman crocodilus in Venezuela and congratulated Venezuelan wildlife authorities for their work in developing a management plan, while offering constructive criticism to improve the management. In closing statements, F. Wayne King, Chairman of the CSG, stated that this 7th working meeting had been the most successful meeting to date.

The formal meetings were followed by a three day field trip into the Venezuelan Llanos. A stop was made at Hato Masagueral, the ranch of Tomas Blohm at which research has been conducted on Caiman, Iguana, and many species of birds and mammals. Facilities for the captive breeding and raising of babas and Crocodylus intermedius had recently been completed at the ranch. Participants then visited Hato El Frio in Apure state to see more captive C. intermedius and many babas in the wild, as well as other abundant wildlife. The final stop before a return to Caracas was a visit to a field station of the Universidad Nacional Experimental de los Llanos Occidentales “Ezequiel Zamora” in the lower Llanos.

The Crocodile Specialists Group will meet again in two years. The site of the next meeting is as yet undecided.

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GIANT TORTOISES

DOWN UNDER


The present-day animals of Australia are a peculiar bunch, but those that lived one million years ago, in the Pleistocene, were even stranger. There was a giant wombat called Diprotodon which was the size of a rhinoceros, and a monster 3-metre-high kangaroo named Procoptodon. This trend to large size was also seen in the turtles. The available specimens of the tortoise *Meiolania* have recently been restudied (Gaffney, E. S. Bull. Am. Mus. nat. Hist. 175, 361; 1983) and some important new finds are reported.

*Meiolania platyceps* was a 2-metre-long tank-like land tortoise that is known from numerous remains found on Lord Howe Island, New South Wales. Its skull was heavy and covered with an outer armour of plates and horns — no doubt so that it could withstand the impact of a giant kangaroo landing on its head. *Meiolania*, like most turtles, had a relatively small braincase, so it probably wasn't very bright. Its shell was huge, and its arms and legs could be pulled in beneath it. One remarkable feature of *Meiolania* is its tail which was long and carried at its end a bony mass made from rings and spikes. Like certain armoured dinosaurs (the ankylosaurs), *Meiolania* could have swung its tail from side to side to deliver a powerful blow to any potential predator.

All the material has been collected from shoreline and soil deposits on Lord Howe Island, and these have been tentatively dated to 100,000 - 120,000 years old. The first *Meiolania* bones may have been collected in 1844, when John Foulis MD visited the island. He later recommended that it be developed as a penal colony, so no doubt the island was not developed in that way.

Richard Owen identified the first skull and tail club of *Meiolania* that he saw as that of a giant lizard (1881, 1882) and, later (1886), other remains as those of a large turtle. It was Thomas H. Huxley, a rival of Owen's, who gleefully pointed out that Owen's 'giant lizard' was in fact a turtle (1887). Since then, other British and Australian scientists have identified various *Meiolania* bones, and speculated wildly about the animal's precise taxonomic relationships.

In the new work, Gaffney redescribes the skull in detail, and concludes that *Meiolania* is a cryptodire turtle, related to present-day soft-shell turtles and tortoises.

*Meiolania* died out, with the giant wombats and kangaroos, some time ago. This may have been caused partly by climatic changes during and after the Ice Ages, or by the arrival of humans in Australia. Giant tortoises still survive, but only just, on the islands of Aldabra and the Galapagos, but these are not close relatives of *Meiolania*. *Meiolania* would have been a tempting food-source for humans because of its large size, although it would not have been easy to kill because of the heavy armour over its head and body. It was probably very slow-moving and dimwitted, however, and an enterprising group of aborigines could have stood on the tortoises back to avoid the tail-club, and attacked its unprotected neck with blunt instruments.

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SNAKES OF THE WORLD

Christopher Metcalfe

The author introduces modern knowledge on the natural history of snakes covering such subjects as feeding, reproduction, behaviour and ecology, colour and patterns, and concludes that

Meiolania is a cryptodire turtle, related to present-day soft-shell turtles and tortoises.

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Scientists have unearthed an assembly of fossils, including the earliest known land-living amphibian in Europe—an ancestor of today’s frogs and toads—and an array of insects and other arthropods which may provide a unique window on life 330 million years ago. The discovery, made by Mr. Stanley Wood in Midlothian, Scotland, and investigated by scientists from Newcastle University, is unique in that it is the first intact fossil assembly to be recovered from the Lower Carboniferous period.

It can provide both a picture of land-based life at that time and links in the evolutionary chain to the later tetrapods.

It is an interesting accident of modern history that the great coal deposits of the Upper Carboniferous have allowed palaeontologists to study this period more completely than any other which is likely to add to the still incomplete picture of early evolution.

Up to now, finds have been confined to periods more recent than 300 million years ago and involved only aquatic fauna.

Various tetrapods emerge as land-living creatures in later epochs, but their ancestors remain unrecorded in the fossil sequence—which is rather like a jigsaw puzzle with most of the pieces missing.

The Midlothian amphibian, a tailed creature rather larger than the present-day common frog, is different.

It limb bones, preserved intact in their original articulation, are heavy and it has few of the characteristics of an aquatic animal.

The Newcastle scientists speculate this animal used water only for breeding and spent the rest of its life on land.

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Close by in the same fossil layer are myriapods—large centipede-like animals—early scorpions and the first known harvestman.

It was a curious fact that many groups of terrestrial animals actually appear in the fossil record as a fait accompli about 50 million years later than the Midlothian find.

Among them are the reptiles, creatures which went on to dominate the world for 200 million years. The Newcastle scientists are optimistic that they may, in the near future, have something important to say about the evolution of reptiles.

The following are the reprints of papers which are currently available from the Division of Amphibians and Reptiles, Museum of Zoology, The University of Michigan. Check those titles listed below which you would like to receive (those in limited supply will be sent on a "first come - first served" basis) and return the list to:

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PART II


New Journal

Mr Thomas A. Huff, Director of the reptile Breeding Foundation in Canada, intends to start a new journal: “The Herpetoculturist”. The contents will consist of articles on various phases of herpetoculture, some regular columns on lizards, turtles, crocodilians, amphibians, boas & pythons, venomous snakes, colubrids and other specialized areas which are of interest. There will also be regular interviews with notable herpetologists and herpetoculturists. This will give many readers an opportunity to "meet" those individuals, although they may never have the opportunity to see them in person. Mr Huff hopes to be able to publish a quality publication, at a reasonable cost, which will have a world—wide distribution and readership. In order to assess the publication costs, he needs to have a rough idea of interest; he therefore urges the members of HAA to inform him when they are interested. He also solicits any suggestions you might have for improving “The Herpetoculturist”.

Initially “The Herpetoculturist” will be issued as the house publication of the Reptile Breeding Foundation, and, as such, will include news and information on their propagation, education and conservation projects. However, it is their intention, with support from the herpetocultural community, to eventually publish a quarterly journal, which will be of value to, and reflect the interests of all within that group. The inaugural issue was scheduled for January 1985. Papers for inclusion in “The Herpetoculturist” should deal directly with captive husbandry or maintenance of reptiles and amphibians. Topics such as cage design and record keeping are acceptable, as they relate to the study of herpetoculture.

Subscription rates have not been established at the present time, but if you would like to receive the first issue, please send your name, membership or organization(s), address and phone to: Reptile Breeding Foundation, P.O. Box 1450, Picton, Ontario, Canada KOK 2T0. 

BOOK REVIEW

Reptile Ecology


The preface reprinted from this book: “Ecology is the science involved with the interactions of organisms and their physical and biotic environments. This field has always been a source of fascination to professional biologists, naturalists and conservationists. In recent years, as human population has progressively increased, environmental problems have also become of vital interest and importance to the public as well. It has now become imperative that ecological principles, and the ecology of specific regions be understood by a wide variety of people. The present series is designed to help fill this need.”

It is felt that the volumes in this series will serve as a source of information for university students, teachers and the interested public who require a basic factual knowledge to broaden their understanding of ecology, and for those conservationists, agriculturists, foresters, wildlife officers, politicians, engineers, etc., who may need to apply ecological principles in solving specific environmental problems. In addition, it is hoped that the series will be a valuable reference work and source of stimulation for professional ecologists, botanists and zoologists. The writing is at a level that will neither encumber the layman with unnecessary jargon nor be too elementary to be of interest to the professional ecologist.

The study of ecology can be approached on various levels. For example, one can emphasize the biotic community and analyze the kinds and numbers of organisms living together in a particular habitat, the way they are organized in space and time and the interactions they have with each other. This type of ecology is known as teneology.

Another way of studying ecology is by systems analysis. In this method, the biotic community and the physical environment which together make up what is known as an ecosystem, are looked upon as a functioning unit. In such an approach the main emphasis is on the cycling of energy, minerals or organic materials within the ecosystem and the factors influencing these processes, rather than specifically upon the organisms themselves. Often mathematical or theoretical models are constructed and tested, frequently with the aid of computers.

Both of the above approaches are synthetic; they take an overview of entire communities or systems and do not emphasize individual species. By contrast the following two approaches in the study of ecology, are concerned mainly with particular species.
The population approach, often called demography, is concerned with: (1) fluctuation in the abundance and distribution of individuals of a given species in an area, (2) the contributing phenomena such as birth and death rates, immigration, emigration, longevity and survival; and (3) the influence of the physical environment and of other species on these characteristics. Of major interest are mechanisms regulating population density and factors influencing population stability.

The final approach to ecology is one primarily concerned with the effect of the environment on the individuals of a species, that is how they are affected by temperature, moisture, light or other external factors. This approach is known variously as environmental physiology or physiological ecology. The keynote is adaptation to specific environments.

All of the above approaches will be employed with varying emphasis in the volumes of this series.

Certain topics, such as ecology of grasslands, ecology of forests and woodlands, or ecology of deserts lend themselves to a community approach; grassland, forest, and desert are types of communities and if studied as an ecosystem level. On the other hand, where specific taxa are treated, the autecological approach is more often used. The particular aspect emphasized varies from group to group, depending on the information available.

Regardless of emphasis, in each book of this series the available information in a particular field is reviewed critically and summarized, so that the reader might be brought abreast of current knowledge and developments. Recent trends are indicated and the foundations for future developments are prepared by highlighting conspicuous gaps in knowledge and pointing out what appear to be fruitful avenues for research.
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