# CONTENTS

## VOLUME IV Bibliography

<table>
<thead>
<tr>
<th>ANNOTATED BIBLIOGRAPHY</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>2 Preparation of bibliography</td>
<td>1</td>
</tr>
<tr>
<td>3 Results</td>
<td>2</td>
</tr>
<tr>
<td>4 References</td>
<td>3</td>
</tr>
<tr>
<td>5 Annotated bibliography</td>
<td>5</td>
</tr>
<tr>
<td>A</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
</tr>
<tr>
<td>C</td>
<td>18</td>
</tr>
<tr>
<td>D</td>
<td>23</td>
</tr>
<tr>
<td>E</td>
<td>28</td>
</tr>
<tr>
<td>F</td>
<td>29</td>
</tr>
<tr>
<td>G</td>
<td>31</td>
</tr>
<tr>
<td>H</td>
<td>34</td>
</tr>
<tr>
<td>I</td>
<td>41</td>
</tr>
<tr>
<td>J</td>
<td>42</td>
</tr>
<tr>
<td>K</td>
<td>46</td>
</tr>
<tr>
<td>L</td>
<td>48</td>
</tr>
<tr>
<td>M</td>
<td>50</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
</tr>
<tr>
<td>O</td>
<td>60</td>
</tr>
<tr>
<td>P</td>
<td>61</td>
</tr>
<tr>
<td>R</td>
<td>64</td>
</tr>
<tr>
<td>S</td>
<td>66</td>
</tr>
<tr>
<td>T</td>
<td>73</td>
</tr>
<tr>
<td>U</td>
<td>78</td>
</tr>
<tr>
<td>V</td>
<td>79</td>
</tr>
<tr>
<td>W</td>
<td>81</td>
</tr>
</tbody>
</table>

## TABLES

Table 1: Numbers of references in Zambezi Basin wetlands bibliography in different categories. 4
BIBLIOGRAPHY OF REFERENCES ON THE
BIODIVERSITY OF ZAMBEZI BASIN WETLANDS

Jonathan Timberlake

1  INTRODUCTION

One of the major requirements for the assessment of existing knowledge on the biodiversity of the Zambezi Basin wetlands is the compilation of a bibliography of published or unpublished (“grey”) literature. Such information, across a range of taxonomic groups and disciplines, is very scattered in the region and not readily available.

Apart from the annotated bibliography produced by Timberlake (1998), on which the present bibliography is based, there has been no comprehensive multidisciplinary listing of publications for the basin. A comprehensive bibliography of wetlands references, but without annotations, is available for South Africa (van der Walt et al. 1995), and annotated or descriptive bibliographies are available for certain wetland areas, such as the Kafue Flats (Nefdt 1993), Lower Shire (Chimpamba 1997), Lake Kariba (Coche 1971) and Lake Chivero (Thornton 1982). The various chapters in the review of biogeography and ecology of southern Africa, which however only extends up to the Zambezi River (Werger 1978), and White's Vegetation of Africa (White 1983), cite much of the formally-published material up to these dates, but not in an annotated or readily accessible format. Some other publications contain detailed bibliographies, but only for certain aspects or biological groups, such as wetland plants and vegetation (Gibbs-Russell 1975, Thompson et al. 1985), mammals (Skinner & Smithers 1991), fish (Skelton 1994), fish and freshwater invertebrates of Malawi (Tweddle & Mkoko 1985), freshwater invertebrates of Namibia (Curtis 1991) and invertebrates of Malawi (Dudley 1998).

The IUCN Zambezi Basin Wetlands Project felt there was a need for an annotated bibliography covering all published and unpublished literature on, or directly relevant to, the wetland biodiversity and ecology of the Zambezi Basin. This was presented as Appendix XI in Timberlake (1998). Since then, in particular in the course of preparation of technical reviews on taxonomic groups carried out in Phase 2 of the study, a number of further references have been noted, and others not seen during Phase 1 have since been located and annotated. The system of keywords used in the original bibliography was found to be rather cumbersome and needed to be revised.

2  PREPARATION OF BIBLIOGRAPHY

References on wetland biodiversity were searched for using libraries, existing publications and regional and national specialists. Particular attention was paid to the four IUCN sub-project sites: the Barotse floodplains, the Chobe/Caprivi wetlands, the swamps of the Lower Shire and the Zambezi Delta. A further 350 or so references were added to the 1250 on the electronic database developed during Phase 1 of the project, bringing the total number to almost 1600. (Unfortunately, many of the references cited in the review on aquatic invertebrates (Vol II, Chapter 11) came in too late to be incorporated in the bibliography or analysis.) All records were captured and held in the bibliographic program ProCite 4. These references were then reduced to the present total of 965 by the use of strict criteria for inclusion:
(a) only references covering distribution, checklists, etc. of wetland groups were included,
(b) only references covering wetland species from within the (palaeo-)Zambezi Basin were included (books covering southern Africa up the Zambezi River were generally included),
(c) references on the biology, ecology or biological aspects of conservation of the (palaeo-) Zambezi Basin wetlands were included,
(d) references on taxonomy, individual records or behaviour have mostly been omitted,
(e) references on geomorphology, soils, agriculture, fisheries, history, etc are not included, unless they contain specific biodiversity information.

Each of the cited references was located, if possible, and annotated. A total of 170 are labelled as not seen (N/S), thus have not been fully annotated. The annotation covers (a) the range or scope of the paper, and (b) brings out the major findings or information relevant to wetland biodiversity in the Zambezi Basin.

A system of 38 keywords was used, listed below. There are two (SAfrica, Zbasin) covering publications with a regional focus, and seven for each of the basin countries (excluding Tanzania) for those publications primarily with a national focus. Many publications concern only a relatively small part of the basin, and 15 such sections containing wetlands were used as keywords. The subject matter covered under biodiversity is quite wide, and six keywords were used to highlight publications on important applied aspects. Finally, eight keywords were used to indicate which taxonomic group/s were being covered – that used for invertebrates was very wide, covering insects, crustacea, molluscs and others.

3 RESULTS

A total of 965 references are listed. A break-down of subject and area coverage using the keywords is shown in Table 1. From this it can be seen that almost half of the references focus on Zambia or Zimbabwe. The best covered geographical areas are Chobe/E Caprivi, Kafue and Lake Kariba. The Zambezi Delta is not particularly well covered at all.

Conservation and human use (including direct human impacts and fisheries) are comparatively well-covered topics, followed by hydrology and water quality. This figure probably reflects the criteria used for inclusion in the bibliography as much as anything else.

Of the taxonomic groups, fish and birds are the best covered, as would be expected, followed by invertebrates, mammals, vegetation and plants. The invertebrates category is disproportionately high as it covers a multitude of groups from mollusces to crustacea to the many insect orders, and a special effort was made to include these references. Plankton (phytoplankton and zooplankton) is particularly poorly covered.
4 REFERENCES


Table 1  Numbers of references in Zambezi Basin wetlands bibliography in different categories (total number of references listed is 965).

<table>
<thead>
<tr>
<th>Subject</th>
<th>no. refs</th>
<th>% total</th>
<th>Subject</th>
<th>no. refs</th>
<th>% total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional</td>
<td>101</td>
<td>10.5</td>
<td>Agriculture/soils</td>
<td>27</td>
<td>2.8</td>
</tr>
<tr>
<td>Angola</td>
<td>18</td>
<td>1.9</td>
<td>Biogeography</td>
<td>57</td>
<td>5.9</td>
</tr>
<tr>
<td>Botswana</td>
<td>102</td>
<td>10.6</td>
<td>Conservation</td>
<td>139</td>
<td>14.4</td>
</tr>
<tr>
<td>Malawi</td>
<td>185</td>
<td>19.2</td>
<td>Human use/impact/fisheries</td>
<td>119</td>
<td>12.3</td>
</tr>
<tr>
<td>Mozambique</td>
<td>90</td>
<td>9.3</td>
<td>Problem/weed species</td>
<td>48</td>
<td>9.1</td>
</tr>
<tr>
<td>Namibia</td>
<td>74</td>
<td>7.7</td>
<td>Hydrology/water quality</td>
<td>88</td>
<td>9.1</td>
</tr>
<tr>
<td>Zambia</td>
<td>270</td>
<td>28.0</td>
<td>Mammals</td>
<td>155</td>
<td>16.1</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>180</td>
<td>18.7</td>
<td>Birds</td>
<td>195</td>
<td>20.2</td>
</tr>
<tr>
<td>Zambezi headwaters</td>
<td>7</td>
<td>0.7</td>
<td>Reptiles/amphibians</td>
<td>63</td>
<td>6.5</td>
</tr>
<tr>
<td>Bangweulu swamps</td>
<td>39</td>
<td>4.0</td>
<td>Fish</td>
<td>223</td>
<td>23.1</td>
</tr>
<tr>
<td>Barotse floodplains</td>
<td>52</td>
<td>5.4</td>
<td>Invertebrates (all groups)</td>
<td>153</td>
<td>15.9</td>
</tr>
<tr>
<td>Chobe/E Caprivi</td>
<td>100</td>
<td>10.4</td>
<td>Plants</td>
<td>115</td>
<td>11.9</td>
</tr>
<tr>
<td>Okavango</td>
<td>52</td>
<td>5.4</td>
<td>Vegetation</td>
<td>140</td>
<td>14.5</td>
</tr>
<tr>
<td>Kafue Flats</td>
<td>102</td>
<td>10.6</td>
<td>Phytoplankton/zooplankton</td>
<td>52</td>
<td>5.4</td>
</tr>
<tr>
<td>Lake Kariba</td>
<td>116</td>
<td>12.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Chivero</td>
<td>21</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mana Pools/mid Zambezi</td>
<td>18</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luangwa Valley</td>
<td>7</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabora Bassa</td>
<td>28</td>
<td>2.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Malawi</td>
<td>63</td>
<td>6.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle Shire/Lake Chilwa</td>
<td>33</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Shire</td>
<td>72</td>
<td>7.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zambezi Delta</td>
<td>39</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5 ANNOTATED BIBLIOGRAPHY

Keywords for Bibliographic Database

Geographical scope
SAfrica [Southern Africa/Africa]
Zbasin [Zambezi Basin (or significant part)]
Angola
Botswana
Malawi
Mozambique
Namibia
Zambia
Zimbabwe
Headwater [i.e. Mwinilunga]
Bangweulu
Barotse [Barotseland]
Chobe [Chobe/Linyanti/E Caprivi]
Okavango
Kafue [Kafue R./Kafue N.P./Kafue Flats]
Kariba
Chivero [Lake Chivero]
Mana [Mana floodplain, Chirundu-Kanyemba]
Luangwa [N & S Luangwa valley]
Cabora [Cabora Bassa]
LMalawi [Lake Malawi]
MShire [Upper/Middle Shire, Lake Chilwa]
LShire [Lower Shire]
Delta [Zambezi Delta]

Subject
Agriculture [crops/livestock/soils/land evaluation]
Biogeography
Conservation [biological conservation actions/concerns]
Human [human use/impact/fisheries]
Probspp [problem species/weeds]
Water [water quality/hydrology]

Biological group
Mammals
Birds
Herps [reptiles/amphibians]
Fish
Inverts [molluscs/crustacea/other invertebrates]
Plants [flowering plants]
Vegetation
Plankton [phytoplankton/zooplankton, including algae]

N/S Botswana, Chobe, vegetation, mammals

N/S birds

N/S birds

N/S Zbasin, conservation, water
Includes fauna which occurs on watersheds feeding Lake Malawi. Nothing on Zambezi wetlands.
SAfrica, mammals

Includes fauna which occurs on watersheds feeding Lake Malawi; nothing on Zambezi wetlands.
SAfrica, mammals

General account of the biology and status of black lechwe. Notes that the subspecies is almost extinct from the upper Chambeshi in NE Zambia.
Zambia, Bangweulu, mammals

Account of open water fish species of Lake Malawi, with descriptions and keys.
Malawi, LMalawi, fish

N/S. Account of *Salvinia* infestation on Lake Kariba.
Zimbabwe, Kariba, probssp, plants

Botanical study of the composition and structure of vegetation at the Sapi/Zambezi river confluence in N Zimbabwe. Five vegetation types are described, including grassland on sandbanks. *Vetiveria* grass is dominant, and *Faidherbia albida* woodland is found at a higher level, only occasionally flooded. The sequence of succession is described.
Mana, Zimbabwe, vegetation, plants

Consultants' report giving results of a survey of the Marromeu complex in September 1990 to determine numbers and distribution of the major wildlife species. There has been a drastic decline in numbers since 1978 - 91% reduction for buffalo, 90% for waterbuck and 83% for hippo; elephant numbers appear similar. Total number of buffalo counted was 3696. The conservation importance of the area is pointed out, along with the detrimental effects from reduced flooding and increased burning. Various recommendations are given, including registering the area as World Heritage and Ramsar sites.
Delta, Mozambique, conservation, mammals

Popular account of the environmental damage Cabora Bassa dam might do. The lack of biological knowledge of the area and of the lower Zambezi valley is emphasised.
Mozambique, Cabora, conservation

Zimbabwe, fish

Popular article on the Zambezi Delta. 156 Wattled and 25 Crowned Cranes were seen in an aerial census in March 1995, along with pelicans, storks and Goliath Herons.
Mozambique, Delta, birds

N/S. Note recording the catch of an upper Zambezi species, *Serranochromis thunbergi*, from a reservoir in the middle Zambezi system.
Zimbabwe, fish

Useful general account of the fisheries and related ecology of the lower Shire, including the problems of water hyacinth and pollution.
Malawi, LShire, human, probssp, water

Account of the lechwe in Zambia; the Kafue lechwe is here included under the red lechwe. Threats to its numbers and conservation are outlined.
Zambia, Kafue, conservation, mammals
   Popular article on the decline of Kafue lechwe from 250,000 in 1930s to 26,000 in late 1950s.
   Zambia, Kafue, conservation, mammals

   Details on new specimens collected from Zambia covering 20 species.
   Zambia, mammals

   155 pp.
   Guide to the mammals of Zambia, with keys. A few species are illustrated; notes are given on distribution, diet and breeding.
   Zambia, mammals

   Type description of *Kobus leche grandicornis* from the Kafue Flats.
   Zambia, Kafue, mammals

   Survey of hippo numbers (following on Attwell 1963) along the southern Luangwa river showing an increase in density and possible over-population.
   Luangwa, Zambia, mammals

   Popular account of the black lechwe taxonomy and distribution.
   Zambia, Bangweulu, mammals

   Definitive and authoritative review of Zambian mammals. Collates much earlier literature and summarises known distributions of all species based on specimens.
   Zambia, mammals

   New distribution records since Ansell 1978 for Zambian mammals.
   Zambia, mammals

   Detailed taxonomic account on 16 species of mammal in Malawi, including records from the lower Shire.
   L.Shire, Malawi, mammals

   Detailed account of skull measurements and taxonomy of the lechwe antelope. Four subspecies are recognised: *K. l. leche* (widespread), *K. l. smithemanii* (Bangweulu & Chambeshi River), *K. l. kafuensis* (Kafue Flats) and *K. l. robertsi* (Luongo/Kalungwishi).
   Zambia, mammals

   Definitive and authoritative review of mammals of Malawi. Contains maps showing distributions; 122 species occur in the lower Shire valley.
   Malawi, mammals

   Additions to the checklist of mammals of Malawi.
   Malawi, mammals

   [only summary available] Consultant's report on the agricultural potential of the Gorongosa-Marromeu-Delta area of Mozambique. Descriptions of vegetation types, soils, pasture potential and physiography are included.
   Mozambique, Delta, agriculture, vegetation

   Taxonomic review of the 12 species of this freshwater mussel family from the Zambezi, Kunene, Cuvelai, Okavango and Linyanti river systems. There is a recognised paucity of ecological information.
   SAfrica, inverts

   Illustrated guide with keys to the molluscs (gastropods, lamellibranchs) of southern Africa, including the Zambezi basin.
   SAfrica, inverts


37. Attwell, R.I.G. (1970). Some effects of Lake Kariba on the ecology of a floodplain of the mid-Zambezi Valley of Rhodesia. *Biological Conservation* 2(3): 189-196. Account of the ecology and importance of the Mana Pools floodplains, and the effects of Kariba dam. Various large mammal species are having a major effect on the ecology of the floodplain woodlands owing to a change in the hydrological regime, and vegetation changes are occurring. The major difference is in the lack of seasonal flooding, resulting in a more homogenous regime. The lack of pre-impoundment studies is pointed out, along with the necessity for occasional releases of water to create flooding. Mana, Zimbabwe, conservation, water, vegetation, mammals


42. Balinsky, B.I. (1967). On some intrinsic and environmental factors controlling the distribution of dragonflies (Odonata), with redescription and a new name for a little known species. *Journal of Entomological Society of Southern Africa* 29: 1-22. Contains a list of 27 species of dragonfly from the Okavango swamps, and 42 species from Kariba (before and after impoundment). Botswana, Okavango, Zimbabwe, Kariba, inverts


44. Balon, E.K. (1971). Age and growth of *Hydrocynus vittatus* Castelnau, 1861, in Lake Kariba, Sinazongwe area. *Fisheries Research Bulletin, Zambia* 5: 89-118. Account of a biological study on tiger fish in part of Lake Kariba. Production is estimated at 21% of fish biomass; considering only 25% of inshore Lake Kariba with water depth of 0-16 m, estimated annual production is 1890 tonnes. Zambia, Zimbabwe, Kariba, fish
List of the fish species collected in the Kalomo river, with a discussion of the importance of Siengwazi Falls as a barrier to movement of eels from the middle to upper Zambezi.
Zambia, biogeography, fish

Zimbabwe, Kariba, human, fish

Detailed study on two *Aleste* (now *Brycinus*) species, which are described as ecologically separated in the upper Zambezi/Kafue River catchments and lower Zambezi respectively. Both occur sympatrically in the new Lake Kariba owing to invasion of the middle Zambezi by *A. lateralis*.
Zambia, Kafue, Kariba, biogeography, fish

Describes a programme to estimate the abundance of inshore fish species. Lists of fish caught are given.
Zambia, Kariba, human, fish

N/S: Summary of much of Balon's previous work. Detailed lists of species collected at various sites are given, with details on their growth.
Zambia, Zimbabwe, Kariba, human, fish

Study of the fish faunas from above and below Victoria Falls. The faunas are shown to be comparatively distinct, and the Falls is considered a physical barrier to upstream migration. Fish biodiversity is substantially higher in the upper Zambezi. However, the Falls are not considered a downstream barrier as can now be seen from the invasion of Lake Kariba by upper Zambezi species. The downstream barrier is considered to have been ecological, a lack of sufficient suitable habitats.
Zambia, Zimbabwe, Kariba, human, fish

N/S: Illustrated descriptions of the fish of Lake Kariba, with notes on their size and biology.
Zambia, Zimbabwe, Kariba, fish

N/S: Zambia, Zimbabwe, Kariba, Kafue, human, biogeography, fish

Detailed account of the biology of eels in Lake Kariba. Although initially it was thought eels would die out as young would not be able to surmount Kariba dam, evidence is presented here that upstream migration is still possible.
Zambia, Zimbabwe, Kariba, conservation, fish

Good brief overview, from a conservation perspective, of the effects of the construction of Kariba on fish ecology.
Zambia, Zimbabwe, Kariba, conservation, fish

Multidisciplinary account of the formation and early limnology, biology and fisheries of Lake Kariba soon after its impoundment. The importance of Victoria Falls as a zoogeographic barrier is discussed. There are sections on the fishery productivity of the Kafue Flats and on the introduction of kapenta.
Zambia, Zimbabwe, Kariba, human, biogeography, fish

Account of the Wattled Crane in the Nyika NP. Includes a map of the wetlands of Malawi.
Malawi, conservation, birds

Account of the effects of overfishing on fish populations and aquatic habitats of waters draining Lake Malawi, with particular reference to the impact of seine netting on the artisanal fish catches. The collapse of the chambo fishery is related to the clearing of their breeding grounds in the weed beds and shoreline vegetation. Most of the fish caught by netting are immature.

Malawi, human, fish, LMalawi


Detailed taxonomic account of 3 Barbus species in Lake Malawi with discussion on their possible evolution and links to species elsewhere. The geomorphological evolution of various E African lakes is described and discussed, along with an account of linkages between the Shire and Zambezi.

Malawi, LMalawi, LShire, biogeography, fish


Vegetation survey of Zambezia Province, north of the Zambezi river. 18 vegetation types are described; the delta is mapped as hydrophilic grassland plus patches of "morrumbala" forest, with mangrove forest and salt flats flanking some of the larger tributaries close to the coast.

Mozambique, Delta, vegetation


Brief account of the vegetation of Mozambique, including the grasslands of Marromeu on the Zambezi delta.

Mozambique, Delta, vegetation, conservation


Report and colour map at 1:2.5 million scale of vegetation of Angola, compiled from existing surveys. There are 32 vegetation types described, grouped into 10 physiognomic types. The Upper Zambezi grasslands are classified as grasslands of sandy plains with poor drainage, typified by Loudetia simplex (Type 31). Occasional trees of Parinari pumila, Syzygium sp. and Magnifistipula eglandulosa are found. Corresponds to vegetation type 65 of Wild & Barbosa (1968).

Angola, headwaters, vegetation


Detailed account of fish species collected in the Okavango River near Rundu, NE Namibia. 31 species are listed, and each is discussed with regard to taxonomy and distribution.

Namibia, Okavango, fish


Malawi, LShire, human


Brief notes on habits and appearance of the species.

Botswana, Chobe, birds


Account of limnological observations on Lake Kariba. The lake is subdivided into 5 basins each with differing hydrological characteristics. There is great amplitude in water chemistry relating to locality, biotope, time of year and depth. The problem of H2S derived from rotting Salvinia is outlined.

Zimbabwe, Kariba, water


Account of the influences of lake level fluctuations (2m annual fluctuation is said to most suitable for fisheries), and on the downstream effects of discharge on both fish and wildlife.

Mana, Zimbabwe, Zambia, Kariba, conservation, fish


Account of the limnology of Lake Kariba and of the change in fish fauna resulting from changed physico-chemical characteristics. Most fish species are of mid-Zambezi river stock and show strong ties with the riverine habitat, particularly in relation to spawning requirements. The cichlids have adapted to lacustrine conditions.

Zambia, Zimbabwe, Kariba, fish, water

Account of vertical distribution of zooplankton in part of Lake Kariba. Zooplankton does not occur below the thermocline because of absence of oxygen in the hypolimnion. When thermal stratification broke down zooplankton closely followed the descent of the thermocline. Plankton maxima occurred in May/June and January/February.

Zimbabwe, Kariba, plankton, water


Popular account of the Marromeu area and aerial crane census, and conservation priorities. At least 58 pairs and several large flocks were seen.

Mozambique, Delta, conservation, birds


Popular account of the possibilities of release of waters from Cabora Bassa to simulate the natural flooding regime. The effects of regulated flow (low wet season flows with no flooding, and high dry season flows) on the ecology and utilization of the Delta are discussed. Noted that there are 2500 Wattled Cranes in the delta wetlands.

Mozambique, Delta, conservation, birds


Of a total world population of 13-15,000 Wattled Cranes, more than 95% occur on the floodplains of the Zambezi, lower Zaire and Okavango. Breeding attempts are highly dependent on hydrological regime. An aerial survey of the Marromeu complex in March 1995 gave an estimate of 208 cranes and 77 breeding pairs, but at a time when most would have dispersed. Other species of crane, storks and egrets were counted. Important numbers of African Openbilled Storks, Saddlebilled Storks and Pelicans were seen. The buffalo count showed c.1000. Drastic reductions in numbers of waterbuck, zebra, hippo and elephant from previous censuses were noted. The level of agricultural development in the wetlands was low, but there is much settlement along the banks of the Zambezi. Numbers of birds noted are tabulated.

Mozambique, Delta, conservation, birds, mammals


Mozambique, Caboira, Delta, water, conservation, birds


Draft m/s. Account of the effects of Cabora Bassa and Kariba dams on the wetlands of the Zambezi Delta. The possibilities of prescribed flooding to simulate historical floods are discussed.

Mozambique, Delta, Caboira, water, conservation


Contains many papers of interest on cranes and wetlands (function and policy) from all over Africa, 18 concerning parts of the Zambezi Basin. Also includes ‘crane and wetland action plans’ for Botswana, Malawi, Mozambique, Namibia and Zambia.

Zbasin, conservation, birds


A compilation of vegetation data from the nationwide soil survey to draw up a vegetation map of Botswana. The Chobe/Linyanti floodplains are covered under Region 12. They consist of grasslands with fringing riverine woodland of *Combretum imberbe* and *Colophospermum mopane*.

Chobe, Botswana, vegetation


Descriptions of birds recorded from Malawi up to 1930 covering 521 species, with details on identification features and distribution.

Malawi, birds


Note with 17 amendments to Jackson 1961 on fish distribution records.

 Zambia, fish


Account of the differences in fish fauna between the upper and mid/lower Zambezi river systems. This is ascribed to there being two distinct drainage basins in the past, which have now joined. A brief account is given of additional mechanisms causing separation. An extensive list of 184 fish species present in the various central African drainage systems is included.

Zbasin, biogeography, fish
Account of movement of fish across the watershed from the Congo drainage system to the Zambezi via wetland areas during the rainy season. Of 16 fish species recorded, 6 crossed the watershed.
headwater, Zambia, biogeography, fish

Lists of species found above and below the Avumba Menda Falls on the Kafue river are given. The Falls are shown to be a zoogeographical barrier to fish from the mid Zambezi.
Zambia, Kafue, biogeography, fish

Zambia, Barotse, fish

Account of traditional fishing in the upper Zambezi floodplains. The cropping of juveniles is not thought to be detrimental to populations. Barotse, Zambia, human, fish

Species lists of fish in the Zambezi basin and Lake Malawi, with a discussion on their biogeography. 361 species are listed, including 22 estuarine and 217 endemic to Lake Malawi. Zambia, L.Malawi, biogeography, fish

Description of the fisheries of the upper Zambezi, including an annotated checklist of the fish species. Zambia, Barotse, biogeography, human, fish

Brief notes on fish predation by birds in the Zambezi Basin. Many bird species are mentioned under family. Zambia, Barotse, birds

Comprehensive account of the fish fauna of Zimbabwe, including the upper and mid Zambezi. Identification keys and descriptions for each species are given, with notes on distribution and biology. Zimbabwe, fish

Zimbabwe, biogeography, fish

Brief account of the introduction of kapenta fish and a species of shrimp into a vacant niche created by the newly-formed Lake Kariba. Causes of mortality are discussed. Zambia, Kariba, Kafue, human, fish

Checklist of fish from the Upper Zambezi not found in the Mid Zambezi prior to the formation of Lake Kariba (50 spp.), recent additions to the checklist of Zambian fish (7 spp.) and a checklist of fish from the Zambian section of Lake Tanganyika (132 sp.). Zambia, Kariba, fish

Comprehensive account of the fish fauna of Zimbabwe, including the Zambezi basin. Subjects covered include the history of ichthyology, zoogeography, ecology, fish morphology and colouration, nomenclature, angling, size records, commercial fishing, description of the river systems of Zimbabwe and fish distribution. This is followed by a key to families and genera, and detailed descriptions of all 132 fish species known to occur in the country, many illustrated in colour. Zimbabwe, Kariba, fish, biogeography

Account of the biology and demise of the black lechwe in the Bangweulu Swamps; numbers have declined from 500,000 to 16,000. This specialised antelope is the only mammal capable of exploiting the high fertility of the floodplain, which could support 10 times the present number. A description of the Bangweulu Swamps is given. Zambia, Bangweulu, conservation, mammals
Four aerial surveys over 2 years, from 1970 onwards, are reported. Population trends and human threats are discussed.
Zambia, Kafue, conservation, mammals

Distribution, taxonomic and other notes on 34 bird species from Zambezi and Kabompo districts of W Zambia.
Zambia, Barotse, birds

Descriptive list of larger mammals of some protected areas in Barotseland in 1964, including results of counts. 18 species were noted from the Liuwa Plains.
Zambia, Barotse, mammals

Annotated list of 94 bird species seen in the lower Shire, including 15 species of waterbirds.
Malawi, LShire, birds

Distribution and taxonomic notes on 45 bird species from Malawi, including 10 waterbirds.
Malawi, birds

A guide to all birds found in Malawi; has a section on habitats.
Malawi, birds

Notes on 161 species of birds from Zambia (including 50 waterbirds), mostly concerning distribution.
Zambia, birds

Illustrated guide to all birds found in Zambia, including notes on distribution and breeding times.
Zambia, birds

Taxonomic notes on the Slatey Egret showing differences from the Black Egret.
Namibia, Chobe, birds

Annotated checklist of 60 species of birds collected from NW Zambia, principally Mwinilunga.
Zambia, headwater, birds

Notes on 5 species of migratory birds which breed in Zambia, including locality descriptions and times of occurrence for Rock Pratincoles.
Zambia, birds

Annotated checklist of 240 bird species from Zambia, including 42 waterbirds, with particular reference to Barotseland. Notes mostly cover taxonomy and distribution.
Zambia, Barotse, birds

Brief notes on 18 breeding species in Zambia, some of them wetland species.
Zambia, birds

Annotated list of 658 species of birds from Zambia with brief notes on status and distribution. Typical species of various habitats are listed.
Zambia, birds
106. Bernacsek, G.M. & Lopes, S. (1984). Cahora Bassa (Mozambique). In: Status of African Reservoir Fisheries (editors J.M. Kapetsky & T. Petr). CIFA Technical Paper No. 10. FAO, Rome, Italy. pp. 21-42. Account of the fisheries of Cahora Bassa. Fishery at present is grossly underutilized, and few data are available. Large fluctuations in water level and high clay loads reduce potential productivity. Data are given on hydrology and water quality. Conflict and inadequate attention to biological concerns during design are outlined. From an ecological viewpoint, Cahora Bassa could be “the least studied and least environmentally acceptable dam project in Africa”.

Mozambique, Cahora, water, human, fish


Mozambique, Cahora, fish, human


Mozambique, L Malawi, human, fish


Brief report on hippo numbers along the Luangwa river in 1967. Total was estimated at 324.

Luangwa, Zambia, mammals


Account of the wetlands associated with the Kavango river in N Namibia, including sections on hydrology, water chemistry, ecology, vegetation and biodiversity. The wetlands are shown to be important for local economic utilization, provision of environmental services and for conservation. Lists of 889 species of plants (including 20 algae) and 73 species of fish are given.

Okavango, Namibia, vegetation, conservation, human, water, plants, plankton, fish, birds, mammals


Namibia, Okavango, water


Detailed technical report on the problem of Salvinia molesta infestation in the E Caprivi, and on the biological control methods used and their success.

Namibia, Chobe, prob spp, plants, inverts


List of fish species found in Namibia. 72 species are recorded from the E Caprivi, of which one is endemic and two rare.

Namibia, Chobe, biogeography, fish


Brief account of a census of hippo along the upper parts of the Shire river. Estimated number is 1029.

MShire, Malawi, mammals


Outline of a study in progress. No data or results are presented.

Botswana, Okavango, vegetation


Account of the vegetation types of a large island in the Okavango delta. 5 main types, subdivided into 21 types, are described based on seasonal water availability and species composition.

Botswana, Okavango, vegetation, plants


Botswana, Okavango, vegetation, mammals


Account of the existing cattle production and carrying capacity of the Kafue Flats. The vegetation of the flats is briefly described. The Kafue Flats are a most valuable agricultural area with great livestock potential, and their value could be reduced by dam construction.

Zambia, Kafue, agriculture, plants


127. Blackmore, S., Dudley, C.O. & Osborne, P.L. (1988). An annotated check-list of the aquatic macrophytes of the Shire River, Malawi, with reference to potential aquatic weeds. Kirkia 13(1): 125-142. Survey of the non-microscopic aquatic plants of the Shire river in Malawi during 1979/80. The 71 species recorded are classified by life-form and position with respect to the water surface. An annotated checklist covers 93 species. The major habitat and plant communities are described. The threat posed by the aquatic weed *Eichhornia* is pointed out. The lower Shire (from Kapichira Falls to its confluence with the Zambezi) has a very shallow gradient. The two main marshes which have a well-developed aquatic flora are Elephant Marsh (500 km²) and Ndinde Marsh (150 km²). Both support important fisheries industries.

128. Blair Rains, A. & McKay, A.D. (1968). The Northern State Lands, Botswana. Land Resource Study 5. Land Resources Division, Surrey, UK. 124 pp. Investigation into the land resources of the Northern State Lands of NE Botswana with a view to developing the cattle industry but conserving wildlife. The area covers c.65,000 km² and includes the Chobe waterfront as far west as the Goha hills, thus excluding the major wetland areas. A vegetation map (scale 1:500,000) is given, and shows a narrow fringe of floodplain grassland along the Linyanti river. Seasonally flooded grasslands along the Chobe river are dominated by *Chloris gayana* and *Setaria sphacelata*. Beds of *Cyperus papyrus*, *Phragmites mauritianus* and *Vetiveria nigranta* occur in permanently wet areas.


130. Bond, W.J., Coe, N., Jackson, P.B.N. & Rogers, K.H. (1978). The limnology of Cabora Bassa, Moçambique, during its first year. Freshwater Biology 8(5): 433-447. Account of limnology of Cabora Bassa dam in its early stages. The initial productive phase is likely to be shorter than that of Kariba, but productivity is likely to be higher in the maturation phase.
Account of the spread of *Salvinia* and *Eichhornia* on Cabora Bassa. Problems are likely to be less than with Lake Kariba.
Moçambique, Cabora, prossp, plants

Account of the invertebrates found on submerged trees in Lake Kariba, and changes in their composition and abundance since the 1960s. A species of mayfly comprised 90% of total biomass.
Zimbabwe, Kariba, inverts

Limnology of the three Great Lakes is described by examining how their physical, chemical and biological properties will determine the response to human activities. Pollution could be a problem as flushing rates are low, climatic change could cause large changes in levels, and eutrophication would cause changes in fish composition. The importance of international cooperation in their conservation is emphasised.
Malawi, LMalawi, conservation, water, fish

Proceedings of a conference on the Okavango. There are 32 papers covering geology, geography, hydrology, history, ecology, utilization and potential developments of the area.
Botswana, Okavango, water, conservation, human, vegetation, fish, herps, mammals, plants

Account of floating weed mats on Lake Kariba, particularly *Salvinia*. Colonisation by other plants is described.
Zimbabwe, Kariba, prossp, plants

Checklist of 37 reptile and 15 amphibian species collected along the northwest shore of Lake Malawi, the Nyika Plateau and Misuku Mountains, with descriptions of 4 new species.
Malawi, LMalawi, herps

N/S. Account of freshwater molluscs in Lake Mālawi.
Malawi, LMalawi, inverts

N/S. Report giving early estimates of the fishery potential of Kariba, limnological and taxonomic work preceding impoundment is discussed, and recommendations for improving fisheries are given.
Zimbabwe, Zambia, Kariba, human, fish

N/S
Zambia, Bangweulu, water

Account of aspects of the ecology of newly-filled Lake Kariba. The major habitats are briefly described with particular reference to infestation by *Salvinia*, which is considered a limiting factor to fish productivity.
Zimbabwe, Kariba, vegetation, fish, prossp, plants

N/S
Zimbabwe, Kariba, vegetation, plants

Account of water plants on a flooded valley on Lake Kariba. A reduction in *Salvinia* is described. The shoreline was sterile in 1967 and by 1972 had been stabilised by *Panicum repens*. A succession of submerged hydrophytes has occurred, and this is enhanced by stable water levels, variation of which should not exceed 2 m.
Zimbabwe, Kariba, vegetation, prossp, plants

Review of knowledge of the freshwater fish of southern Africa. The origins of the fish fauna and its current distribution and probable dispersal routes are examined. The two major fish faunas are of standing and running waters. The considerable and rapid changes in water availability during the Pleistocene are pointed out. The effects of man on fish distribution and composition are discussed, with particular reference to Lakes Kariba and Cabora Bassa. Checklists of river fishes and fishes of Malawi are given.

SAfrica, Kariba, Cabora, biogeography, fish


Brief account of bacteria and phytoplankton found in Lake Chivero. Their importance as food for zooplankton is pointed out.

Chivero, Zimbabwe, plankton


Popular account of the birds of the E Caprivi; 330 species were recorded in 1988.

Namibia, Chobe, birds


Brief notes on occurrence of 123 bird species recorded in 1988, including 31 water-related species (8 new records).

Namibia, Chobe, birds


Very good overview of wetland definition, functions and values, with particular reference to Namibia but with direct relevance to the Zambezi Basin. The paper suggests a classification of wetlands based on the US Fish and Wildlife Service definition, which makes much biological sense. This definition incorporates system (marine, estuarine, riverine, lacustrine and palustrine), regularity of flooding and substrate type.

SAfrica, Namibia, vegetation, water


N/S Zambia, Bangweulu, birds


N/S Zambia, Bangweulu


Account of 56 dragonfly species collected in Africa S of the Zambezi, with particular reference to the Cape species. Only locality in Zambezi Basin is Victoria Falls. Includes detailed discussion of ecology and zoogeography. A list of 142 species by geographical area is given.

SAfrica, biogeography, inverts


Annotated checklist of birds from Zambezi District in W Zambia covering 340 species. Separate lists are given for various vegetation types.

Barotse, Zambia, birds


Report on a herpetological expedition to the Nyika Plateau, Misuku mountains, Lake Malawi, Mt Mulanje and Lake Chilwa. Nothing on Lower Shire.

Malawi, LMalawi, MShire, herps


Comprehensive and annotated list, with keys, of all reptiles and amphibians in the country. Distribution maps are given.

Zambia, herps


Monograph on a group of terrapins found in the region.

SAfrica, herps


Book providing detailed accounts and distribution maps for snakes of the region south of the Zambezi.

SAfrica, herps
Brief account of the biology of a freshwater turtle, which in the Zambezi basin is confined to the lower Zambezi below Cabora Bassa, the Shire valley and Lake Malawi.
Malawi, LMalawi, LShire, Mozambique, herps

Annotated checklist of 57 species of reptile and 35 species of amphibian collected in the Mwinilunga area in 1990.
headwater, Zambia, herps

List of 12 reptile and 8 amphibian species collected from Elephant Marsh on the lower Shire and Dedza.
LShire, Malawi, herps

Checklist of 418 bird species recorded from the Kafue NP during October 1964.
Zambia, Kafue, birds

Brief account with maps of the status of 3 crane species in Namibia. Distributions are plotted by quarter-degree squares for the period 1979-1988. Wattled Cranes occur in E Caprivi (6 squares); 6 breeding pairs are estimated on the Nkasa-Lupala islands (Kwando-Linyanti).
Namibia, Chobe, conservation, birds

Comprehensive report on social and natural resources of the W Caprivi up to the Kwando river. The Kwando floodplain is 2-5 km wide, and joins the Linyanti. It has a permanent swamp system along its lower reaches, as well as riparian woodland. Brief vegetation descriptions are given. There is a high invertebrate, reptile, amphibian and bird diversity along the rivers. Comprehensive lists are given of flowering plants, alien plants, fish (Kavango river only), amphibians, reptiles, birds and mammals.
Chobe, Namibia, human, conservation, mammals, birds, fish, herps, inverts, plants

Review of knowledge on freshwater molluscs of southern Africa. Both temperate and tropical faunas are recognised, but the diversity of molluscs in southern Africa in general is low. It is believed that the upper Zambezi is grossly under-collected, and its diversity is higher than presently recognised. Preliminary species lists for various areas are presented. Lake Malawi has a rich endemic molluscan fauna of over 20 species, principally found in deep water.
SAfrica, LMalawi, biogeography, inverts

N/S

Detailed taxonomic account of the aquatic gastropods of the lower Okavango river in Namibia and Botswana, including the Okavango delta. Most of the 20 species found are widespread Afrotropical species; there are no endemics, but *Bellamya monardi* is only known from the Okavango and Cunene rivers.
Namibia, Chobe, Botswana, Okavango, biogeography, inverts

N/S
SAfrica, inverts

Survey of crocodiles in the Elephant Marsh, where 168 breeding females were counted. Six major types of marsh habitat are described, and related to crocodile breeding needs.
Malawi, LShire, conservation, herps

Back to Contents

N/S. May contain lists of fish from the lower Shire valley.
Malawi, LShire, water, fish
Account of the relationship between butterfly distributions and vegetation (past and present). Special mention is made of the Zambezi wetlands.
SAfrica, biogeography, inverts

Brief account of 4 fish species netted in the Kafue river and their size distributions.
Zambia, Kafue, fish

Account of stomach contents of 15 fish species from the Kafue River including algae, other plants, other fish, crustacea, insects and molluscs.
Zambia, Kafue, fish, plankton, inverts

Brief report on various invertebrates, especially insects, collected from both terrestrial and aquatic habitats on the Kafue floodplain.
Zambia, Kafue, inverts

Results of a hydrobiological survey of the Kafue to determine the ecological importance of seasonal flooding. Zooplankton and phytoplankton were most dense during low water stages, and the invertebrate fauna at the margins varied more seasonally than that in submerged vegetation. Breeding in most fish followed periods of flooding. Detailed results are presented.
Zambia, Kafue, water, fish, inverts, plankton

List of woody plants with vernacular names, including from Inhaminga and Marromeu.
Delta, Mozambique, plants

Account of the ecology of both the Bangweulu swamps and Kafue Flats, with particular reference to wildlife and its utilization.
Zambia, Kafue, Bangweulu, human, conservation

N/S
Zambia, Kafue, conservation, mammals

N/S
Zambia, Kafue, conservation, vegetation

Detailed records of collections made during an expedition.
Malawi, Mozambique, LS,Shire, inverts

Report on 1986 amphibian survey resulting in 26 species being found, of which 4 are new Namibian records. An annotated list of species is given, and a link with the tropical frog fauna of Malawi is suggested.
Namibia, Chobe, biogeography, herps

Checklist and distribution maps for 43 species of frog in Namibia.
Namibia, herps

N/S. Probably contains a list of fish species from the Kafue with notes on their ecology.
Zambia, Kafue, fish
First record on the establishment of this exotic tilapia species, including comments on its potential impact.  
Zambia, Zambia, Kariba, fish

Account of problems associated with introduction of tilapia fish for fish farming, particularly Oreochromis niloticus. The study focused on NE Lake Kariba.  
Zimbabwe, Kariba, fish, prospp

Review of mammal behaviour observed during translocation exercises around Lake Kariba. An account of the physical and biological features of the area is given.  
Zimbabwe, Kariba, mammals

Detailed account of the ecology of the Chobe area, including vegetation and wildlife resources. Notes on distribution and biology of the larger mammals are given. Suggestions on the development and management of National Parks and tourism are included. Appendices include a checklist of 318 species of birds in the Chobe Game Reserve.  
Botswana, Chobe, conservation, vegetation, mammals, birds

Botswana, Chobe, conservation, mammals

Study comparing 3 species of Kobus antelope on the Chobe floodplain. Habitat differences are mentioned. Both puku and lechwe populations are declining; puku are now isolated from other populations.  
Botswana, Chobe, conservation, mammals

Account of 20 areas of particular importance for bird conservation in Zimbabwe, including (within the Zambezi Basin) the Middle Zambezi Valley, Batoka Gorge and Lake Chivero. Species of particular interest are mentioned.  
Zimbabwe, birds, conservation

Review of the effects on fisheries of damming the Kafue river. The Kafue floodplains produced 8000 tons of fish annually and was important for commercial farming. Although feasibility studies predicted an increase in fish production after dam closure, this has not materialised.  
Zambia, Kafue, human, fish

N/S. Detailed illustrated account of the birds found in Mozambique south of the Zambezi; an up-date of Clancey (1971). Distribution maps of some species are given; a gazeteer is included.  
Mozambique, birds

Brief account of the 9 major wetlands of Zambia, giving size and conservation importance.  
Zambia, conservation

Discussion on meshing the range of biotic communities in Malawi with the distribution of protected areas. The wetlands of the lower Shire are not formally protected. It is concluded that an approach looking at representation, rare and threatened species, aesthetics and catchment conservation is required.  
Malawi, vegetation, conservation

Detailed, illustrated identification guide to the woody plants south of the Zambezi. Simplified distribution maps are given.  
SAfrica, plants

First part of a 18 part series of papers (from Cimbebasia 1973-78 and Entomology Memoirs 48-53) on the termites of southern Africa. Very few records from Botswana (including Okavango/Chobe), Zimbabwe and Mozambique are cited.  
SAfrica, inverts
N/S. Distribution and yield of commercially important fish caught in 6 inch gillnets is presented. Yields were greater near the bottom than the water surface, but decreased with water depth. The highest yields were from nets set at 1.5 m depth. 
Zimbabwe, Kariba, human, fish

Account of the factors determining vegetation structure across Zambia. Geomorphology is shown to be of great importance, as in the floodplain grasslands which are subject to seasonally poor drainage. Older floral elements may persist on old exhausted soils with poor drainage. Most of the grasslands lie on sandy to sandy-clay soils with a bed of nodular laterite below the surface; soils are acid and low in exchangeable bases, having suffered leaching over a long period. The grasslands of the Kafue Flats, however, lie on black clay soils which are base-rich and sometimes calcareous. The dynamic nature of vegetation on a changing landscape is stressed.
Zambia, biogeography, vegetation

Authoritative account on threatened birds worldwide. Uses the new IUCN criteria of threat status for each country including Botswana, Malawi, Mozambique, Namibia and Zambia, and lists the threatened and near-threatened species. Among waterbirds, Slaty Egret (in 3 countries), Wattled Crane (in 5), Comorcrake (in 3) and White-winged Flufftail (in 1) are all threatened and described in some detail. For near-threatened waterbirds, Madagascar Pond Heron (in 1), Shoebill (in 2), Lesser Flamingo (in all 5), Great Snipe (in 4) and Black-winged Pratincole (in 3) are simply listed. Each species is also categorised according to any of 9 threats.
SAfrica, conservation, birds

Comprehensive book giving details of conservation status and type of threat for many bird species. Covers wetland birds and bird habitats of the Zambezi wetlands, including Slaty Egret (indeterminate), Shoebill Stork (special concern), Wattled Crane (special concern) and White-winged Flufftail (indeterminate).
SAfrica, conservation, birds

N/S
Zambia, Barotse, mammals

Descriptions and taxonomic account of 154 species of mollusc from Mozambique. 111 spp are terrestrial and 43 are aquatic.
Mozambique, inverts

Detailed taxonomic account of molluscs from southern Africa, south of the Cunene and Zambezi rivers, covering 764 spp.
SAfrica, inverts

Survey of a water bird along the Zambezi from the source to the Luangwa confluence in 1986-87. 1000 birds were counted in Barotseland and 230 in E Caprivi; 33 of 35 breeding colonies found were on the Barotse floodplain.
Barotse, Mana, Chobe, birds

Account of a collecting trip for tree frogs in the Marromeu area; 7 species are mentioned.
Mozambique, Delta, herps

Account of reptiles collected during a trip to the lower Shire valley and Zambezi delta; 24 species are listed, 17 from the delta.
Malawi, Mozambique, LShire, Delta, herps

Account of snakes collected during a trip to the Zambezi Delta; 29 species are described. A checklist of amphibians (32 species) and reptiles (69 species), principally from the lower Zambezi and delta, is given.
Mozambique, Delta, herps

Detailed study on diet and biology of the crocodile, including data from the Bangweulu swamps, Luangwa valley, Kafue Flats and the upper Zambezi. Zambia, herps


Account of a study on the composition, distribution and status of riparian woodland on the Botswana side of the Linyanti and Kwando rivers. Elephants are thought to be the major cause of the extensive tree damage noted. Acacias are particularly affected. Botswana, Chobe, vegetation, conservation, mammals


Useful general account of the African lakes, including Lake Malawi, and their biodiversity problems. Malawi, LMalawi, biogeography, conservation, fish


Study of the changes in fish species composition and abundance following damming of the Kafue river. A marked decline in fish catches was noted following initial high productivity. There was also a decline in species diversity with cichlids becoming dominant, ascribed to fluctuating lake-levels. There is an unfilled niche for plankton-feeding open-water species. Zambia, Kafue, human, conservation, fish


Account of studies into phytoplankton around the lake and at various times of year. The plankton has a riverine origin, and is mesotrophic. Composition shows a typical seasonal pattern with blue-green algae dominating in the warm rainy period and diatoms in the cold dry season. 155 species of algae are listed. Zimbabwe, Kariba, water, plankton


Detailed study and descriptions of freshwater molluscs from Lake Malawi, including discussion on ecology. Malawi, LMalawi, inverts


Results of an aerial census of Gorongosa and central Marromeu. Buffalo, hippo and wildebeest have disappeared from Gorongosa NP and populations of elephant, hartebeest, waterbuck and zebra are now at very low densities (c.1 animal/10 km²), a drastic decline on the 1979 census. Elephant numbers were estimated at 108, and buffalo at 2346. Continued drastic declines in buffalo and waterbuck in Marromeu are noted; the declines seem to have occurred before 1990. Mozambique, Delta, mammals, conservation


Early detailed account of the topography, flood levels, climate, soils and vegetation. A list of 218 plant species is included. Namibia, Chobe, water, vegetation, plants


Account of the species of aquatic invertebrates, fish and amphibians found in Namibia, discussed by catchment. Endemics are also listed. The Caprivi wetlands have the greatest diversity of all Namibian wetland systems, but not a high level of endemicity. 82 fish species, 38 frogs (mostly water-dependent species: 75% of species recorded for Namibia), 27 molluscs (16 snail, 1 limpet, 10 mussels), 14 Annelida, a freshwater jellyfish, a freshwater sponge, and 140 species of Coleoptera have been recorded. Diversity of Mollusca, Coleoptera, Odonata and Dipterans high for Namibia. The Okavango River also has a high species diversity owing to varied habitats. Mollusc fauna is similar to that of Caprivi, but the insect fauna differs (only c.40 spp.). The river has the highest Ödomata and Dipteran diversity of any wetland habitat, but there are few Crustacea. There are 79 fish species, none endemic; the frog fauna is similar to that of Caprivi (c.30 spp.). Namibia, conservation, herps, fish, inverts


Account of the larger invertebrates found in freshwater and wetlands from all over Namibia. There are sections on sponges, coelenterates, flatworms, ectoprocta, roundworms, annelids, molluscs, crustacea and insects. Composition is also discussed by wetland/river type. An extensive bibliography is given. A list of 646 species is presented (127 from E Caprivi); about 50 of these species are thought to be endemic to Namibia. The E Caprivi wetlands are probably grossly under-recorded, but are not considered comparatively rich or specialised. Namibia, Chobe, Okavango, inverts

N/S. Descriptive account of most species in these groups occurring in the area.

Zbasin, inverts


Account of the abundance of the shallow water shrimp as related to outflows of the Zambezi. Flows directly affect the number of recruits or induce changes size at migration. It is not clear, but the paper seems to say that reduced flood flows replaced by a more continual flow regime since Cabora Bassa has had a detrimental affect on the shrimp fishing industry.

Mozambique, Delta, water, human, inverts


The final volume of this checklist of fish in Africa deals with the family Cichlidae (143 genera and 870 species). It includes both a systematic list and 3000 literature references.

SAfrica, fish


The first volume of a major checklist, dealing with the Chondrichthyes (3 families) and 30 families of Ostechthyes, from the Lepidosireniformes to the Cypriniformes.

SAfrica, fish


The second volume of this important checklist, which covers 43 osteichthyian families, from the Siluriformes to the Perciformes (but not including the cichlids).

SAfrica, fish


Account of the effects of mounds of a species of termite on the floodplains of the Okavango. The mounds modify nutrient flow rates and distribution, and landscape topography, and thus effect the ecology and biological composition.

Botswana, Okavango, inverts


Popular article on the environmental impact of the closure of Cabora Bassa dam.

Mozambique, Cabora, Delta, conservation


N/S

Zbasin, water


N/S. Papers from a workshop on potentials and problems associated with the Cabora Bassa dam, principally from a conservation perspective. Only drafts available to date.

Mozambique, Cabora, Delta, water, conservation, birds


Account of the potential impacts of the impoundment of the Zambezi at Cabora Bassa. Discussion includes sections on aquatic weeds, fisheries, bush clearing, wildlife, human health and downstream effects.

Mozambique, Cabora, conservation, human, water


Popular account on the natural history of the sitatunga in the Chobe area.

Botswana, Namibia, Chobe, mammals


Detailed survey of aquatic macroinvertebrates from the Cunene River in Namibia between the Ruacana Falls to downstream of Epupa Falls in order to provide a baseline for monitoring. The importance of maintaining a reasonably even flow regime is stressed. Finds in the various taxonomic groups are briefly discussed; several new species were recognised. Photos and field sheets from the 19 recording sites are given.

Namibia, inverts
Account of study on the behaviour and population structures of lechwe, waterbuck and puku in Zambia. Compares social organisation, territorial behaviour and habitat selection.
Zambia, mammals

N/S.
Zambia, Bangweulu

A classic comprehensive account of the Bangweulu swamps in NE Zambia with details on hydrology, geography, vegetation and agriculture, and on the Chambeshi river.
Zambia, Bangweulu, plants, agriculture

N/S. Unpublished checklist of Zambian butterflies.
Zambia, inverters

N/S.
SAfrica, birds

Compiled book containing 10 detailed and definitive papers on various aspects of the vegetation, botany and ecology of wetlands throughout Africa. A botanical/ecological approach is taken, rather than a geographical approach.
SAfrica, vegetation, conservation, probopp, plants

Report on various aspects of the biology and ecology of Lake Chilwa. The importance of the lake for waterfowl, particularly Palaearctic migrants, and fishery is emphasised. Sections on ecology, vegetation, invertebrates, fish, amphibians, reptiles, mammals and birds are included.
Malawi, MShire, human, vegetation, fish, birds, herps, mammals, inverts

Large illustrated identification book on the butterflies of southern Africa covering 781 species, including 16 confined to the Zambezi wetlands. Food plants are mentioned.
SAfrica, inverters

Detailed management plan for the Gorongosa-Marromeu area, including the wildlife areas on the S bank of the Zambezi.
Mozambique, Delta, conservation, vegetation, human

Account of the natural resources (mammals, plants, fish) of the Zambezi Delta area and their present use, including vegetation descriptions. Lists of marine algae, zooplankton, timber trees and fish are given, and maps of distribution of some of the resources.
Mozambique, Delta, conservation, vegetation, plants, mammals, fish, plankton, human

Zambia has extensive habitat for two species of crane; the Kafue Flats being the most important area. The Wattled Crane is found in many of the wetlands, while the Grey Crowned Crane is concentrated in the Luangwa valley.
Zambia, Kafue, Luangwa, birds

Brief account of distribution and numbers of Wattled Crane and Grey Crowned Crane on the Kafue Flats in 1992/93. Notes on breeding behaviour are included.
Zambia, Kafue, conservation, birds


244. Douthwaite, R.J. (1974). An endangered population of Wattled Cranes (Grus carunculatus). Biological Conservation 6(2): 134-142. Account of Wattled Cranes on the Kafue Flats. Up to 3000 were estimated for the dry season. They are threatened by an upstream dam and the changed flooding regime; breeding success is higher in good flood years. Food plants are listed.


247. Douthwaite, R.J. (1982). Waterbirds: their ecology and future on the Kafue Flats. In: The consequences of hydroelectric power development on utilisation of the Kafue Flats (editors G.W. Howard & G.J. Williams) Kafue Basin Research Committee, University of Zambia, Lusaka, Zambia. pp. 137-140. Account of the waterbirds of the Kafue Flats and their ecology. Over 400 bird species have been listed of which 125 are waterbirds. The effects of the Itezhtezhi dam could help simulate natural flooding, which is the key to the bird diversity.


250. Douthwaite, R.J., Hustler, C.W., Kruger, J. & Renzoni, A. (1992). DDT residues and mercury levels in Reed Cormorants on Lake Kariba: a hazard assessment. The Ostrich 63: 123-127. Account of the impacts of DDT and mercury on the Reed Cormorant in Lake Kariba. DDT residues were detected in all samples, along with 4 insecticides in some. Adult female fat contained sufficient to cause egg thinning and breeding failure.
Account of recovery of Fish Eagles in N Zimbabwe after DDT spraying. There were less DDT residues and thicker shells in 1998 compared with 1989, and a decline in birds population in some parts of Lake Kariba.
Zimbabwe, Kariba, conservation, water, birds

Multidisciplinary study on the effects of DDT spraying on a range of organisms (bats, birds, lizards, fish, insects) in the middle Zambezi catchment. Adverse effects were found in populations of 4 birds and 1 lizard species, and species numbers were low for some.
Zimbabwe, Kariba, water, birds, fish, herps, inverts, mammals

Zambia, Kafue, vegetation

Checklist of 337 species from the Kafue Flats from personal observation and other publications, of which 119 are waterbirds. Brief indications of habitat are given.
Zambia, Kafue, birds

Brief account of migrant birds (Cattle Egret, Sacred Ibis, African Spoonbill, Red-billed Teal) ringed in South Africa that have been recovered in Barotseland and elsewhere.
Zambia, Barotse, birds

Study on the biomass and composition of large mammal populations on grasslands in the Kafue NP. 26 species are noted.
Zambia, Kafue, mammals

Account of 48 recoveries from birds ringed in South Africa, 42 of which were found in Barotseland. There are both a high number of waterbirds and high hunting pressures there.
Zambia, Barotse, birds

A series of country bird checklists (including Angola, Botswana, Namibia, Zambia, Zimbabwe, Malawi and Mozambique), with common names, status and bibliographic references. Summary statistics are given.
Angola, Botswana, Namibia, Zambia, Zimbabwe, Malawi, Mozambique, birds

N/S
Zambia, birds

N/S. Notes on 31 species including waterbirds.
Zambia, birds

Account of numbers of aquatic birds on the Kafue Flats and Kafue river, and their association with lechwe. 33 species are listed for the Flats and 22 species for the Kafue River.
Zambia, Kafue, birds

Study of the environmental impacts of two potential dams. Vegetation, terrestrial invertebrates, amphibians and reptiles, birds and mammals were looked at. The Mupata scheme would have a severe negative effect on the ecology of the Mana floodplain. Birds (16 spp) would be affected adversely (5 spp beneficially). The negative effects from the Batoka Gorge scheme would be relatively minor.
Mana, Zimbabwe, conservation
Synopsis of the findings of an environmental impact assessment of the Batoka and Mupata dams on the Zambezi in Zimbabwe. The Batoka scheme is considered far less detrimental environmentally.
Zimbabwe, Mana, conservation, water

Account of preliminary EIA studies on hydroelectric schemes at Mupata and Batoka gorges on the mid Zambezi river in Zimbabwe, which concluded that Batoka entailed much less environmental cost. Likely impacts on mammals, birds, fish, terrestrial and aquatic vegetation, and human health of each scheme are discussed.
Zimbabwe, Mana, conservation, water

Brief account of the mid-Zambezi valley in Zimbabwe, with particular reference to the lake shore habitats of Lake Kariba, the alluvial terraces below Kariba, and inland mopane pans. Wetlands are shown to be of limited extent, the largest being Mana Pools.
Zimbabwe, Mana, conservation, water

Account of the reptiles and amphibians of Lake Chilwa. The general area is said to be rich as it forms part of a zoogeographic transition zone. A checklist is given, and some species discussed.
Malawi, MShire, biogeography, herps

N/S Malawi, inverts

Account of the growth of 3 tilapia species. It is predicted that their growth and survival would be enhanced by flooding for the Kafue Gorge dam.
Zambia, Kafue, human, fish

N/S Report which may give lists of important fish species and data on changes after the closure of the Kafue Gorge dam.
Zambia, Kafue, human, fish

Account of the growth of 2 tilapia species since dam closure (see Dudley 1974). There appears to be no obvious change in growth rates, and reproductive success is said to have become more erratic owing to changes in flood regime.
Zambia, Kafue, human, fish

Consultants' report giving a good assessment of the possible effects of the Kapichira power station on the wetlands of the lower Shire valley. Contains summaries of basic data on Elephant Marsh (physiography, geology, hydrology, biology, socio-economic). On biodiversity, concentrates on hippo, crocodiles and fisheries. They found that unless Lake Malawi water levels drop significantly, no

Study on changes in fish catches on the Kafue floodplain after dam construction. Of 9 species abundantly caught pre-impoundment (1969/70), only 1 species increased in frequency after impoundment (1975/76), while 3 predator species decreased. It is not clear if this is due to changes in flooding patterns or earlier dry conditions. Annual fish yield was around 3000 tons.
Zambia, Kafue, human, fish

A study of the relationships between environmental factors and plant species composition of alluvial vegetation in the Mana Pools area along the Zambezi river. Grass and sedge species composition was shown to be related to soil moisture regime. *Faidherbia albida* is a pioneer species on low-lying sandbanks, and woody species diversity increased with height above the river. A list of plant species found is given.
Zambia, Kafue, human, fish

Account of biomass, productivity and large mammal utilization of floodplain herbaceous vegetation on the Mana floodplain, Zimbabwe. Production was greater in perennial than in annual grasslands, with utilisation varying between 53 and 99% of annual production. 

Manza, Zimbabwe, vegetation, mammals


First visual record of puku on the Zimbabwe side of Zambezi. Suggested that it had moved west from the Luangwa-Zambezi confluence. 

Manza, Zimbabwe, mammals


Account of a 6% survey of larger mammals (grey duiker, impala, reedbuck, elephant and nyala) of the area north of Gorongosa. Estimates of total numbers (all species) are low at 408 head. Uncontrolled hunting is a major problem compounding diminution of numbers owing to the war. Hardwoods are being illegally exploited. There is still good potential for use of the area for hunting. 

Mozambique, Delta, mammals


Brief notes on 20 species of bird from S Zambia, including some from wetlands. 

Zambia, birds


Detailed reports on antelope conservation status for ten countries. Reviews protected areas and includes crude distribution maps of all species within each country report. The three lechwe subspecies are all considered threatened. 

SAfrica, conservation, mammals


Discussion on the proposal to introduce kapenta into Lake Malawi and the impact this may have on the lake fish communities. 

Malawi, LMalawi, conservation, human, fish, inverts


Taxonomic book covering some of the commercially important genera of fish. 

Malawi, LMalawi, fish


Series of 9 colour maps at 1:500,000 scale bound in large format cover of the vegetation of Zambia. Accompanying text is printed on the reverse of each sheet. The legend shows 17 vegetation types, based primarily on the Yangambi classification system, grouped into 6 physiognomic classes. Most of the Barotse floodplains are mapped as grassland (type 17) with inclusions of Kalahari sand woodland (type 13), which becomes more common upstream. The Kafue flats (downstream) and the Lukanga swamps are both mapped as grassland (type 17), surrounded principally by munga woodland (type 15). Classification follows Fanshawe (1971). 

Zambia, vegetation


Report, including aerial photos, on extent and distribution of *Salvinia* in the river system, showing distribution in parts on airphoto mosaics. The weed extended about 50 km upstream of Lake Lianbezi.

Namibia, Botswana, Chobe, probop, plants


Account of the distribution and history of *Salvinia* in the Kwando-Linyanti-Chobe river system, including results from control measures. 

Namibia, Botswana, Chobe, probop, plants


Account of the zooplankton, including rotifers and crustacea, of two man-made lakes near Harare, Lake Chivero and Cleveland Dam. 

Chivero, Zimbabwe, plankton


Detailed quantitative ecological study on the vegetation of the Kafue Flats. About 3000-5000 km² out of 7000 km² is inundated for 1-7 months/year. Account covers physical environment, vegetation zones, phytosociology, plant phenology, plant productivity, decomposition and fire. One finding is that C₃ grasses dominate on the floodplain. 

Zambia, Kafue, vegetation
Botswana, Okavango, plants

Account of peat fires in the Okavango swamps. These are shown to be long-lasting and to cause transformation of the habitat, and possibly later reflooding.
Botswana, Okavango, vegetation


Study on water bird numbers along the S bank of Lake Kariba. 25 species are recorded; no general patterns between waterbird occurrence and aquatic macrophytes.
Zimbabwe, Kariba, birds

Account of study on a specialised predator of molluscs on the shores of Lake Kariba. Numbers of storks were highest when water levels were low. Distribution of storks was related to high abundance of the mussel *Mveta dubia*, and not to total density or biomass of mussels.
Zimbabwe, Kariba, birds, inverts

Gives a list with abundance of all fish species collected when a small dam near Harare was drained.
Zimbabwe, fish

Account of a proposed technique to measure exploited fish stocks along the Kafue river. Quantity of fish taken is estimated at 5600 ton/year, mostly through gill-netting.
Zambia, Kafue, fish

Account of the vegetation of Sesheke District in the south of Barotseland. The district is principally comprised of Kalahari sands, with some old alluvium. The vegetation is described under 12 types (*Cryptosepalum* forest, *Baikiaea* forest, riparian woodland, miombo/Kalahari woodland, sulphurex savanna, mopane woodland, munga woodland, Kalahari termitaria, mopane termitaria, munga termitaria, dambo and floodplain) with species lists for each type.
Zambia, Barotse, vegetation, plants

Account of the vegetation of Kalabo District in northwest Barotseland. The district is very flat, around 75% being sand plain or floodplain, and poor in woody species. The vegetation is described under 9 types (swamp woodland, riparian woodland, seepage dambos, Kalahari woodland, Kalahari sulphurex savanna, dry dambo, munga termitaria, munga/riparian termitaria, and flood plains), with species lists.
Zambia, Barotse, vegetation, plants

Account of the vegetation of the Mongu area in W Zambia, lying principally on Kalahari Sand. 14 vegetation types are described (*Cryptosepalum* forest, Kalahari sand chippa, *Baikiaea* forest, *Pteleopsis* woodland, swamp woodland, riparian woodland, seepage dambo, miombo woodland, Kalahari sand woodland, munga woodland, dry dambo, munga termitaria, munga/riparian termitaria, and floodplain), each with species lists.
Zambia, Barotse, vegetation, plants

Account of the vegetation of Mwinilunga District at the headwaters of the Zambezi. The vegetation is described under 15 types (*Cryptosepalum* forest, Kalahari sand chippa, chippa scrub, swamp forest, riparian forest, seepage dambo, miombo woodland, hill miombo, miombo/Kalahari woodland, watershed plain, dry dambos, miombo/Kalahari termitaria, riparian termitaria, dambo grassland, riverine grassland), each with species lists. The district is perhaps the richest in plant species in Zambia with over 50 woody endemics.
Zambia, headwater, vegetation, plants
Comprehensive account of the vegetation of Zambia. There are 18 vegetation types described, grouped into 6 classes; these are mapped in Edmonds (1976) map of vegetation at scale 1:500,000. Floodplain grasslands often comprise swards of bunch grasses; Hyparrhenia rufa is characteristic of shallowly flooded margins and Echinochloa pyramidalis of the floodplain proper. Vossia is found in the “sump”. Tristachya and Themeda are characteristic of the sandy floodplains of Barotseland. Swamps (e.g. Lukanga, Busanga) contain Cyperus papyrus, Oryza longistaminata, Leersia hexandra, Pennisetum glaucocladum, Phragmites mauritianus and Vossia cuspidata.
Zambia, vegetation, plants

Account of the biology of the common reed, often found flanking river channels, with brief notes on its ecology, uses and control

Account of the vegetation of Balovale (Zambezi) District in central North West Province. Most of the district is underlain by Kalahari sands. The vegetation is described under 18 types (dry evergreen forest, dry deciduous forest, swamp forest, riparian forest, moist dambos, miombo woodland, hill miombo woodland, Kalahari woodland, Kalahari/miombo woodland, Burkea-Diplorhynchus scrub, suffrutex savanna, bush groups, Kalahari sands munga woodland, dry dambos, miombo termitaria, dambo grassland, riverine grassland), each with species lists.
Zambia, Barotse, vegetation, plants

Account of the vegetation of Kabompo District in northwest Barotseland. Almost the whole district is underlain by Kalahari sand. The vegetation is described under 13 types (dry evergreen forest, chipya woodland, dry deciduous forest, swamp forest, riparian forest, moist dambos, miombo woodland, Kalahari woodland, munga woodland, dry dambos, termitaria, dambo grassland, riverine grassland), with species lists for each type.
Zambia, Barotse, vegetation, plants

N/S. Should contain much important information on fisheries and wildlife.
Zambia, Kafue, human, agriculture, mammals, fish

N/S
Malawi, LShire, human, mammals, herps

Study of faecal bacteria from untreated sewage in river water below Victoria Falls town.
Zimbabwe, water

Account of herp collections (99 species) from the Kalahari area of Botswana, W Zimbabwe and the Transvaal, including the Chobe. Botswana, Zimbabwe, Chobe, herps

An on-going series of taxonomic publications covering the flora of Caprivi, Botswana, Zambia, Zimbabwe, Malawi and Mozambique. Each part covers a family or group of families. 154 out of 233 families have been published to date.
Zbasin, plants

N/S. Study shows significant fish mortality in lagoons in the Okavango delta after ultra-low volume spraying of endosulfan for tsetse fly control.
Botswana, Okavango, water, fish
Brief results of a fish catching trial in open and *Salvinia*-covered waters along the Linyanti river. Oxygen concentrations are given; those under *Salvinia* are 7% compared to 34-41% in open water. 11 fish species were caught in open water compared to 2 species under *Salvinia*, with only 12% of open-water weight.
Botswana, Chobe, probsp, fish, plants

English section of longer work; illustrations from p.399. Review of information on freshwater molluscs across Mozambique with particular reference to those which are potential carriers of bilharzia. Study looks at biology, ecology and taxonomy. 28 species are described and distributions given.
Mozambique, inverts

Detailed consultants' report on the role and actions of fire, with particular reference to vegetation structure, composition and productivity in Western Province.
Zambia, Barotse, agriculture, vegetation

Brief account of the eels collected from various tributaries of the Zambezi river in Zambia.
Zambia, fish

Detailed description of a breeding locality of these two species in the Okavango swamps.
Botswana, Okavango, birds

N/S. Considered an important publication on Lake Malawi.
Malawi, LMalawi, inverts

N/S. Considered an important publication on Lake Malawi.
Malawi, LMalawi, inverts

N/S. Considered an important publication on Lake Malawi.
Malawi, LMalawi, inverts

One of the first detailed accounts of the littoral fish communities of Lake Malawi. Research was principally focussed on Nkata Bay and also covered cichlid taxonomy. Each littoral habitat has a different fish fauna and many species show striking adaptations to their mode of life. Food webs are constructed. An extensive discussion on evolution and phylogeny of this group follows; the group is restricted to rocky shores and sandy beaches are effective barriers to dispersal.
Malawi, LMalawi, biogeography, fish

Account of the conservation problems facing the African great lakes, including Lake Malawi.
Malawi, LMalawi, conservation

A major book on cichlid fish which has stimulated much of the later research. It gives accounts of the evolution, taxonomy, biology, behaviour, ecology and commercial importance of these species in the African great lakes.
Malawi, LMalawi, biogeography, fish

Account of the distribution and habits of sitatunga in the Okavango swamps. Seasonal movement and feeding patterns are affected by the annual flood regime. Conflicts with cattle are examined.
Botswana, Okavango, mammals

**Back to Contents**
Account of sitatunga populations in the Okavango, showing that their distribution is determined by flood regime. The species is a non-selective feeder.
Botswana, Okavango, mammals

Study of the effects of crocodiles in Lake Kariba on the fish and fisheries. Fish form the major part of the diet, but the Kariba crocodiles probably only consume 10-15% of fish offlake from artesanal fishing.
Zimbabwe, Kariba, herps, fish

Study on variation in shrimp production off the Zambezi delta. Annual variations in abundance are correlated with wet season runoff. Control of flow from Cabora Bassa dam to fit in with the shrimp life cycle could improve potential productivity.
Mozambique, Delta, human, inverts

Study on the relationship between water flows of the Zambezi and shrimp (Penaeus indicus) production on the Sofala Bank off the mouth of the Zambezi delta. Catch rate is positively related to river runoff, but not to rainfall. Annual shrimp abundance can be related to wet season river runoff, and in years with a late wet season there is a tendency towards larger shrimps. Controlled water release from Cabora Bassa could enhance shrimp production.
Mozambique, Delta, human, water, inverts

Brief account of the distribution and ecology of aquatic plants in Zimbabwe. Of 491 species only 11 are free-floating and another 60 are submerged. Rivers have the highest proportion of species, and although pans have fewer species than man-made lakes, a higher proportion of those species are restricted to them.
Zimbabwe, plants

Bibliography of 638 references on aquatic plants from Botswana, Zimbabwe and South Africa. References are also listed by genus.
SAfrica, plants

Comprehensive keys to the genera and species of aquatic plants recorded from Zimbabwe. Each species is briefly described.
Zimbabwe, plants

Brief account of water plants found in Zimbabwe lakes and pans, with descriptions of the common species.
Zimbabwe, plants

Lists 521 butterfly species for Malawi, but very few from the lower Shire.
Malawi, inverts

Consultants' report on the feasibility of introducing kapenta into Cabora Bassa. Water quality is discussed, along with phytoplankton, primary productivity, zooplankton and kapenta biology.
Mozambique, Cabora, water, human, plankton, fish, inverts

Cycle of zooplankton density that fluctuated with the moon phase was observed in Cabora Bassa. Limnothrissa miodon feed on zooplankton more efficiently when the moon is full, switching to other food sources when the moon is low, thus allowing the zooplankton population to recover; a classical predator-prey relationship. Suggests that the moon phase cycle in zooplankton is a global phenomenon.
Mozambique, Cabora, plankton, fish

Brief account of a census of Wattled Cranes in Marromeu with a map of habitats. 2570 birds were estimated, along with other wetland birds.
Mozambique, Delta, birds

Brief popular account of the wildlife and birds of Marromeu, and conservation prospects for the area.
Mozambique, Delta, conservation, birds


344. Griffin, M. & Channing, A. (1991). Wetland-associated reptiles and amphibians of Namibia - a national review. Madoqua 17(2): 221-225. Review of amphibians and reptiles associated with Namibian wetlands. 88% of amphibians are not restricted to wetlands, but some species of both reptiles and amphibians are dependent on perennial water. No species are considered endangered. A list of 64 species is given, of which 46 are found (or expected to be found) in the E Caprivi/Kwando area. Namibia, Chobe, herps

345. Griffin, M. & Grobler, H.J.W. (1991). Wetland-associated mammals of Namibia - a national review. Madoqua 17(2): 233-237. Review of mammals (large and small) associated with Namibian wetlands. About 10% of the total mammal fauna is thought to be dependent on wetlands. The highest species diversity of this group is in the Kavango-Caprivi area, including puku, sitatunga, bushbuck, oribi, waterbuck and red lechwe. Larger mammals are under threat from both habitat destruction and hunting. A list of 37 species is given, of which 34 are found in the E Caprivi/Kwando area. Chobe, Namibia, conservation, mammals


351. Grobler, M. & Ferreira, J. (1990). The dying of Lake Liambezi. *Custos* 19(6): 40-44. Popular account on the drying up of Lake Liambezi in Caprivi by 1985. About 1000 kg of fish were harvested each day at its height, and was a very important local source of protein. Drying out was rapid, followed by peat fires on the bed. The lake is said to only appear after good flood years, after which it can be maintained by lesser annual inflows. Hunting of elephant and hippo has caused blockage of river channels, so refilling may now be less likely. Namibia, Chobe, human


355. Guy, P.R. (1977). Notes on the vegetation types of the Zambesi Valley, Rhodesia, between the Kariba and Mpata gorges. *Kirkia* 10(2): 543-557. Vegetation survey of the mid-Zambezi valley area below the escarpment in Zimbabwe from Kariba Gorge to near Kanyemba. There are 18 vegetation types described. The Zambezi floodplains are described as *Faidherbia albida* woodland. Lining the watercourses are the perennial grasses *Vetiveria nigritana* and *Setaria sphacelata*. Mana, Zimbabwe, vegetation


Account of 1974 pre-Cabora Bassa research into water quality of the waters of the Zambezi. Temperatures increase going downstream and average pH is 7.8. The river is well oxygenated, but transparency is low. Water quality of the mid Zambezi was principally determined by Lake Kariba, and that of the lower Zambezi below the Shire confluence by the ionically-rich Shire river.

Mozambique, Cabora, LShire, water


Account of human effects on vegetation in Lengwe NP in the lower Shire valley, including agriculture, fire, logging and direct utilization of plants. The effects of large mammals on vegetation are also discussed.

Malawi, LShire, plants, human, mammals


An annotated list of over 500 plant species found during the course of a vegetation survey of Lengwe NP in the lower Shire valley. A summary of the major vegetation types is also given. Seasonally inundated grasslands or dambos are one type, and are characterised by the grasses *Setaria palustris* and *Ischaemum afrum*. Woody plants are restricted to termitaria. The floodplain of the Nkombedzi-wa-Fodia river is dominated by the tall grasses *Sorghum sudanensis* and *Pennisetum purpureum*, while sandbanks in the river support *Phragmites mauritianus* and *Cyperus* sp.

Malawi, LShire, vegetation, plants


N/S. Brief account of butterflies caught at Mana Pools, N Zimbabwe.

Zimbabwe, Mana, inverts


Account of some diatom associations in 4 sites in Lake Kariba, and a comparison with two stretches of the Zambezi river.

Zimbabwe, Kariba, plankton


Describes the diatom species associated with submerged trees and *Salvinia* in Lake Kariba between 1963 and 1972.

Zimbabwe, Kariba, plankton


Account of the ecological processes affecting the Kafue Flats.

Zambia, Kafue


General review of the ecology of the Kafue Flats covering geology, climate, vegetation and animal life (particularly invertebrates). Productivity, nutrient cycles and symbioses are discussed.

Zambia, Kafue, vegetation


Popular account of an aerial survey of black lechwe.

Zambia, Bangweulu, mammals


List giving 342 additions to Mitchell’s 1963 plant checklist.

Kafue, Zambia, plants


Brief notes on counts of various lechwe subspecies in Zambia in 1966-68.

Zambia, Kafue, Bangweulu, mammals


Study on the behaviour, reproduction, feeding habits and predation of waterbuck in the Kafue NP, Zambia.

Zambia, Kafue, mammals


A checklist of 322 species was made from 5 habitats at Mopeia and from the Shire confluence to Luabo in 1972-73, including 94 species of waterbirds. Some habitat information is included.

Mozambique, Delta, vegetation, birds
Account, concentrating on birds, of the changes in the river and marsh systems of the lower Shire due to the activities of rural people and the SUCOMA sugar estate. Most effects have been negative, but cane fields have provided habitats for some species.
Malawi, LShire, conservation, birds

Account of occurrence of the African Skimmer in Malawi, including breeding along the lower Shire.
Malawi, LShire, birds

Account of a study on palaearctic passerines at Nchalo, lower Shire valley. 9 species of warbler were caught over 5 years.
Malawi, LShire, birds

Notes on breeding of the African Skimmer along the lower Shire river.
Malawi, LShire, birds

Notes on dangers to duck breeding from shooting.
Malawi, LShire, birds

Notes on capture of 15 species of Palaearctic passerines at Nchalo, lower Shire valley from 1973-1986. Oristreu is demonstrated for some species. Weather is shown to have an effect on numbers captured.
Malawi, LShire, birds

Account of breeding of a waterbird on the lower Shire. Breeding occurred in 1981 and in 1982-86.
Malawi, LShire, birds

Summary account of ringing results (1973-1989) from Nchalo, lower Shire valley. 579 individuals of 75 species are known to be 5+ years old.
Malawi, LShire, birds

Gives information on the distribution of 32 rodent species in Malawi, but the collections from wetlands were very limited. 9 species may occur in the lower Shire valley wetlands.
Malawi, mammals

Compares rodent communities at Zomba, Lengwe and Liwonde in terms of seasonal changes in populations and species occurrence. Malawi, mammals

Account of the bats in Malawi including biological and ecological data. 55 species are listed, with the lower Shire valley being the richest area with 35 species. Most live in woodland savanna but may forage over the wetlands.
Malawi, mammals

Account of the distribution and status of the 59 bat species recorded from Malawi; relative abundance was determined by catch effort. Based on high species diversity and rarity, conservation of several sites in S and C Malawi is recommended. Chiromo in the lower Shire has a high diversity (30 spp), with the remaining woodlands being particularly important habitats.
Malawi, LShire, conservation, mammals

Early record of the limnology and fishery of the filling Lake Kariba. Comparison of fish catches with pre-impoundment days shows higher yields. Catch composition changed continuously as the lake filled. Provides a list of fishes from Middle Zambezi prior to flooding. Zimbabwe, Kariba, human, fish

N/S Zimbabwe, Kariba, human, fish, water
Review of knowledge on most groups of freshwater invertebrates found in southern Africa. The two groups are the south temperate Gondwana fauna and the tropical pan-Ethiopian fauna; the biology and ecology of these groups are discussed.
SAfrica, biogeography, inverts

Detailed illustrated account of distribution, with maps, of all southern African birds based on observations from across the region.
SAfrica, biogeography, birds

Report on various research projects on the fish and fisheries of the lower Shire. Aspects of the biology of 9 important fish species are described, including the economically most important, a catfish. There are sections on primary productivity, physical and chemical features of the water, and the effect of various factors (flooding, water level, temperature), with particular emphasis on Elephant Marsh. The vegetation of Elephant Marsh is described in detail. A list is provided of fish species collected in the lower Shire.
Malawi, LShire, human, water, fish

Account of the wetlands of Angola. Within the Zambezi hydrogeographic basin various types of wetland are found, including "chanas" (seasonally inundated edaphic grasslands) and "anharas" (seasonally flooded grassland of large extent). Lakes include Lake Cameia on the Chonga (Lumeje) river and Lake Diloło. Caiema NP comprises seasonally inundated floodplains and three lakes (Cuamba, Calundo and Chaluvanda), now with few large mammals. In the Zambese numerous dambos are found in the headwater region. Hippo and crocodile are common in the rivers and lakes, with red lechwe, bushpig, roan antelope, reedbuck and sitatunga associated with the floodplains. Fish are common, and fishing is an important economic activity. Many people are now farming on the "chanas" and over-exploitation and soil erosion are becoming common.
Angola, vegetation, mammals, fish, human

N/S
Namibia, fish

N/S
Namibia, fish, water

N/S
Namibia, fish

Included in this book are historical observations on wildlife populations in the lower Shire. Livingstone in 1859 noted over 800 elephant on one floodplain as well as buffalo and antelope. Elephant Marsh was one of the two first gazetted Game Reserves in 1897, but was deproclaimed in 1922.
Malawi, LShire, mammals, human

Account of 91 species and subspecies of smaller mammals (principally insectivores, bats and rodents) collected from Lunda District in NE Angola. 14 species are recorded from Angola for the first time. A gazeteer of collecting localities is included. Although much of the study area lies in the Zaire drainage system, some information is provided on the upper Zambezi catchment, particularly from vicinity of Calundo, Cazombo and Mafondo.
Angola, mammals

N/S. List of butterflies found in Zambia with notes on distinguishing features and localities.
Zambia, inverts

N/S. Unpublished report - said to be one of the best studies on dambo ecology in Zambia.
Zambia, vegetation

Notes on records of Reed Warbler, including from the Okavango and Chobe.
Botswana, Okavango, Chobe, birds

Details of a non-breeding migratory population of this bird species in the Savuti area of N Botswana.
Botswana, Chobe, birds

N/S. Remains the main review of Angolan mammals.
Angola, mammals

Good account of the ecology and species (plant, bird, herps and mammals) found in seasonal pans in an area of the Kalahari adjacent to the Zambezi basin. The importance of these seasonal and shallow waterbodies for conservation is shown. Lists of amphibians, reptiles, birds and mammals using the wetlands are given.
Namibia, vegetation, conservation, herps, birds, mammals

Three species of crane occur in Namibia, associated with the three wetland areas, including the Chobe/Linyanti system. The numbers of Wattled Crane fluctuate, being lowest in the dry season. Breeding takes place, but numbers are low (10-12 pairs). The Grey Crowned Crane is occasionally seen along the Chobe and Okavango rivers.
Namibia, Chobe, birds

Popular account of ornithological sites and species of interest in the Caprivi. Many bird species are mentioned.
Namibia, Chobe, birds

Account of arid zone wetlands in Namibia and their importance, including mention of the Kwando, Linyanti and Chobe-Zambezi floodplains.
Namibia, conservation, birds

Detailed vegetation survey (chapter 5) and map of the Caprivi, giving 36 types grouped into Kalahari, mopane and riparian woodlands, and floodplains. Species descriptions are given of each type.
Namibia, Chobe, vegetation

N/S
Namibia, probspp, plants

Account of unusual wader birds, incorporating 374 records of 15 species. Occurrence is analysed and habitat requirements described. Great Snipe, Black-tailed Godwit, Redshank and Green Sandpiper have been recorded along the Zambezi and Chobe Rivers in Botswana and Zimbabwe.
SAfrica, Chobe, birds

Consultants' report on fisheries potential for the Caprivi region. A brief account of the ecology and fish species found is given.
Namibia, Chobe, human, fish

Both the Wattled Crane and Grey Crowned Crane (c.5000 individuals) occur in Zimbabwe. Because they generally do not occur in protected areas the future of their wetland habitat on the central plateau depends partly on commercial farmers. Some captive breeding is being carried out.

Zimbabwe, conservation, birds


Review of the fish found in Namibian wetlands. 59 species are found in the E Caprivi of which 78% are associated with floodplains, although the Kavango river system has a higher diversity. There are two endemic species in Caprivi; the striped killifish is also endangered.

Namibia, Chobe, fish


Zambia, conservation


Account of an stratified aerial census of the Kafue Flats. 2508 Wattled Crane were estimated present; one third of those counted were in pairs.

Zambia, Kafue, birds


Unpublished abstract covering the types of wetland ecosystems in Zambia. Zambia's wetlands have the highest biodiversity in the region.

Zambia, conservation


Paper points out that an understanding of the taxonomy, distribution and general ecology of waterbirds is necessary for conservation. More detailed and accurate information is needed on population trends, movements, feeding requirements and sizes of foraging habitats for key species.

SAfrica, conservation, birds


Abstract only. Emphasises the importance of wetlands in contributing to overall biodiversity of the Zambezian region, but points out the lack of functional information. Threats to African wetlands are summarised.

Zbasin, conservation


Census of 3 bird species in Zambian wetlands. 3282 Wattled Cranes were estimated for the Kafue Flats in May 1982, similar to that 9 years before. The Bangweulu swamps contained 232 Shoebills, 275 Saddlebilled Storks and 1718 Wattled Cranes.

Zambia, Bangweulu, Kafue, birds


N/S

Zambia, conservation, mammals


N/S

Zambia, Kafue, mammals


Account of an aerial census in October 1983 which shows a large increase in population since 1973.

Zambia, Bangweulu, mammals


Account of morphological differences in various lechwe populations, suggesting that the red and Kafue lechwe are similar, but the black lechwe is a distinct subspecies.

Zambia, Kafue, Bangweulu, mammals


Study involving classification of the marginal vegetation of Lake Chilwa. Water depth was the major determining factor, but salinity and disturbance were also important.

Malawi, MShire, vegetation, water


A major reference source, covering most of the wetlands and topics of biodiversity interest to the IUCN wetlands project. Wetlands are discussed by country, with semi-detailed accounts of individual areas, including extent and major species. Southern Africa is covered in section 5, which gives a good overview with a geographic perspective.

Zbasin, conservation, vegetation


Unpublished detailed review of available literature on the wetlands of northern Botswana, principally the Okavango, but with some reference to the Linyanti and Chobe. Ecological impacts are discussed.

Botswana, Okavango, Chobe, human, vegetation, birds, mammals


Consultants' report on a soil survey of the marsh with transects taken by boat. Vegetation types are briefly described. A soil map at scale 1:50,000 is included, along with a land classification map showing land capability for irrigated agriculture if the marshes are drained.

Malawi, LShire, agriculture


Study on the impact of fish-eating birds on the commercial fishery of Lake Kariba. Most numerous species were Reed Cormorant and Darter; numbers of Reed Cormorants were correlated with fish abundance. Reed Cormorants and Darters increased to maximum numbers in November-December, and during the year accounted for 85% of the fish removed by birds. Total fish removed in 1987 was estimated at 1460 tonnes.

Zimbabwe, Kariba, birds


Study on the effect of fish-eating birds on the fisheries of Lake Kariba. The extent of suitable habitats determines feeding. Cormorants and darters were the most numerous species and eat between 10 and 20% of their weight in fish daily. However such fish species are generally not commercially utilized.

Zimbabwe, Kariba, fish


Notes on occurrence of Swamp Nightjar on upper Zambezi floodplain habitats.

Chobe, Zimbabwe, birds


Study of two small fish species comprising 14 and 7% of inshore fish population, and which are the major components of fish-eating birds on the lake. Combined production of the 2 species in suitable habitat could be 40 kg/ha/year.

Zimbabwe, Kariba, fish


Account of 26 bird species on the lake, particularly Reed Cormorant, Whitewinged Balck Tern and Darter. Average numbers were 25,000 individuals. Gently sloping shores were the best fishing grounds, and few birds were noted on steeply sloping shores or in open water. Birds were most numerous during the rainy season. They consumed less than 1000 tons of fish per year, compared to 40,000 tons taken by commercial fisheries.

Zimbabwe, Zambia, Kariba, birds


Detailed account of the biology of the lakefly, a conspicuous and important component of the zooplankton of Lake Malawi, and which frequently forms dense swarms over the lake.

Malawi, LMalawi, plankton, inverts


Account of the crustacea in the zooplankton of Lake Malawi, including data on their abundance, biomass, production and seasonal variation.

Malawi, LMalawi, plankton, inverts
Account containing some data on the composition of zooplankton of Lake Malawi, including data on its biomass and rates of growth.
Malawi, LMalawi, plankton

Detailed account of the biological of the most abundant crustacean species in the zooplankton of Lake Malawi, with data on its population structure, development, food dependence and diet.
Malawi, LMalawi, plankton, inverts

Annotated list of 16 bird species collected from the Lower Zambezi between Tete and Sena, and Gorongosa Mountain.
Mozambique, birds

Account of the physical characteristics of 2 egret species from the Chobe/Carprivi/Okavango area, with discussion on their distribution and evolution.
Botswana, Okavango, Chobe, birds

Illustrated guide to the birds of Zimbabwe with distribution maps.
Zimbabwe, birds

Anatomical and distribution notes on 34 bird species including the African Sedge Warbler.
Zambia, birds

Taxonomic and anatomical notes on 43 birds from Zambia, including 6 species of waterbirds.
Zambia, birds

Account with taxonomic and distribution notes on 25 species of birds including 4 waterbirds.
Zambia, birds

Report on bird collecting expeditions to the lower Chobe area between Kasane and Ngoma, including Lake Liambezi. Includes an account of previous ornithological work, avian zoogeography, and a brief ecological account of the 11 habitats. 460 species are recorded including 82 species of waterbird.
Botswana, Chobe, birds

Annotated list of the grass species of Malawi giving distribution and habitat, covering 371 taxa (only 18 species that could be in the Lower Shire). A key and description of broad habitat types is given.
Malawi, plants

Brief account of the first lungfish record from the Gwembe Valley in the mid Zambezi. Nearest records are the Zambezi delta, lower Shire and in N Zambia.
Zbasin, fish

Checklist of the fish recorded from Malawi, particularly Lake Malawi.
Malawi, LMalawi, fish

Keys and annotated descriptions of all 156 fish species recorded in Zambia at that time (plus 25 spp of uncertain status, but excluding Lake Tanganyika), including common and vernacular names. A brief introduction to fish systematics and zoogeography is given, along with a comprehensive bibliography.
Zambia, fish
Zambia, Zimbabwe, Kariba, biogeography, fish

SAfrica, biogeography, fish

Zimbabwe, Kariba, human, water, fish

Cabora, Mozambique, probspp, human, fish

Zbasin, fish

Zbasin, fish

Cabora, Mozambique, human, probspp, fish, plants

Malawi, LMalawi, fish, plankton

Malawi, LMalawi, fish

466. Jackson, P.B.N. & Rogers, K.H. (1976). Cabora Bassa fish populations before and during the first filling stage. *Zoologica Africana* **11**(2): 373-397. Study of the effects on fish species and populations of the filling of Cabora Bassa dam. The effects over a short period are shown to be marked, with rapid disappearance of some species and population increase of others. Breeding patterns were also disrupted. 38 species are listed pre-impoundment. Aquatic weeds also have had an effect.
Cabora, Mozambique, human, fish

Malawi, LShire, human, mammals

Botswana, Chobe, agriculture, human, vegetation

Zimbabwce, Kariba, mammals


475. Jeanes, K.W. & Baars, R.M.T. (1991). The vegetation ecology and rangeland resources, Western Province, Zambia. Vols. 1/2. RDP Livestock Services/Livestock Development Project, Western Province, Mongu, Zambia. 208 pp. Detailed report on the rangeland resources and potentials for livestock production of Western Province. Land systems and land units are described and mapped (see separate entry), and the vegetation of each described in detail, both woody (5 types) and herbaceous (5 types). Herbaceous production is estimated. Dry season water availability is discussed, as is the extent and influence of tsetse fly. An accompanying detailed map (scale 1:500,000) shows 71 species-defined vegetation types, grouped structurally. Volume 2 contains lists of species with vernacular names (including tree species, browse species, grasses, poisonous plants), range types and land units. All field sheets are included. Barotse, Zambia, agriculture, vegetation


First of 5 reports (1982-87) on this Orthopteran group (grasshoppers) from Zambia.
Zambia, invert

Account of this Orthopteran group (grasshoppers) from Botswana. 160 species are mentioned, many from the Okavango/Chobe area.
Botswana, invert

Popular account of the biological and economic importance of wetlands in Namibia. Dangers of the impacts of dams and overgrazing are discussed.
Namibia, Chobe, conservation, human

N/S
Botswana, Chobe, vegetation, mammals

Account of food and feeding habits of the Cornish jack and bottlenose in Lake Kariba, *M. delicosus* fed mainly on anisopteran nymphs and cichlid fishes, while *M. longirostris* was a benthic feeders on a variety of invertebrate taxa. With both species there was a change in diet with size.
Zimbabwe, fish, Kariba

Brief account of the distribution of tigerfish, with map showing the importance of physical barriers to upstream dispersal. The species occurs in the upper, middle and lower Zambezi, but not above the Kafue Gorge or Murchison Falls on the Shire.
Zbasin, biogeography, fish

Account of the 60 fish species recorded during collecting trips to various parts of the Upper Zambezi and elsewhere. Notes on particular species of interest are included.
Zbasin, Caprivi, Barotse, fish

Popular account of the angling fish of the Zambezi river, with particular reference to Kariba. The fisheries potential of the lake is discussed.
Zimbabwe, Kariba, fish, human

Illustrated guide to the fishes of Zimbabwe, including from the upper Zambezi.
Zimbabwe, fish

Expanded and revised version of Jubb (1961), which includes most, but not all, of the fish species from the Zambezi system.
SAfrica, biogeography, fish

Brief account of fish surviving passage through turbines and water pumps associated with power stations. Fish from the upper Zambezi could by-pass Victoria Falls to the mid Zambezi via the power station.
Zbasin, fish

N/S
Zimbabwe, fish

Account of the introduction of kapenta and the first few years observations. *Limnothrissa* took less than 3 years to become established throughout Lake Kariba.
Zimbabwe, Kariba, fish


Back to Contents

Brief account of the Grey Crowned Crane in the Barotse floodplain, Liuwa, Luena and Matabele Plains. From a ground survey, distribution appears to have been reduced to a small part of the Luwa Plains (80 birds). This is ascribed to human impacts such as agriculture and hunting, and to successive droughts.

Barotse, Zambia, conservation, birds


Account of the distribution and biomass of bottom dwelling fauna, principally mussels. Total biomass was estimated at almost 119,000 tons, 96% of it comprising four species of mussel. This high value is ascribed to a lack of predators.

Zimbabwe, Kariba, inverts


Account of the relationship between fish breeding on the mid Zambezi floodplain and the discharge of water from Kariba, with recommendations on the timing of discharge. Lists of fish species found at Mana Pools are given.

Zimbabwe, Kariba, inverts


Popular book on the history and natural history of Lake Kariba, from its inception to the late 1970s. Particularly strong on fish and fish ecology.

Zimbabwe, Kariba, inverts


Account of a survey on freshwater mussels on the Zimbabwe side of Lake Kariba. 4 species occur with a total biomass of 160,000 tonnes, one third of it flesh.

Zimbabwe, Kariba, inverts


Account of a study on breeding of 3 species of freshwater mussel in Lake Kariba and Lake Chivero. In Kariba 2 species breed through the year while other species show seasonality.

Zimbabwe, Kariba, inverts


Account of a study into seasonal breeding habits of 2 species of mussel in Lake Kariba. Both species seem capable of successive spawning at intervals of a few weeks, possibly owing to sustained warm waters of the lake.

Zimbabwe, Kariba, inverts


Account of the populations of larger fish species in Lake Kariba with data on their relative abundance from 1960 to 1975. Changes that followed the creation of the lake are outlined.

Zimbabwe, Kariba, fish


Popular illustrated account of the fish species and fish ecology of Lake Kariba. Contains much useful information.

Zimbabwe, Kariba, fish


Collection notes on 60 mammal species from the lower Shire taken from Wood's collections.

Malawi, LShire, mammals


Account of 5 species of caddis fly collected from Victoria Falls.

Zimbabwe, Kariba, inverts


Lists the genera of phytoplankton, especially diatoms, found in a small river flowing in to Lake Kariba. Diatom populations consist of cosmopolitan tropical taxa.

Zimbabwe, Kariba, plankton
N/S
Delta, Mozambique, mammals

N/S
Malawi, MShire, biogeography, fish

Account of the infestation of the Caprivi wetlands by *Salvinia*, including on various methods of control.
Namibia, Chobe, prospp, plants

Checklist of 260 species recorded from the E Caprivi in 1978-79, incorporating an additional 117 species from 5 previous lists. 120 species of waterbirds were included. An account of the area and its habitats is given.
Namibia, Chobe, birds

Brief note on a wetland bird restricted to papyrus swamps. It was found in the E Caprivi wetlands in 1986-88, but within the Zambezi Basin is principally confined to the Okavango and Linyanti.
Namibia, Chobe, Okavango, Botswana, birds

Well illustrated book of cichlid fish species of Lake Malawi, particularly those of interest to aquarists.
Malawi, LMalawi, fish

Account of the Wattled Crane across its mostly southern African range, with recommendations on conservation actions. The species inhabits scattered wetlands such as the Kafue flats, Bangweulu swamps, Busanga plains, Liuwa plains, Okavango and Makgadikgadi pans. Individual wetlands support 250-3000 individuals. They feed mainly on sedge tubers and rhizomes. Numbers of cranes nesting during the rainy season and available food depend on amount of flooding or receding water; it has an inherently low breeding rate. Suitable habitat is being lost through habitat alteration such as dams and intensive agriculture.
Zbasin, conservation, birds

Account of the ecological importance of the Kafue Flats which supports the largest world population of Wattled Crane (c.3000), and describes the threats posed to the floodplain by the Kafue Gorge and Itezhi-tezhi dams.
Zambia, Kafue, conservation, birds

N/S. List of Angolan butterflies.
Angola, inverts

N/S. May contain a list of fish species from the Kafue with notes on the population changes after dam closure.
Zambia, Kafue, human, fish

N/S. Illustrated book under preparation of the 250 butterfly species recorded from Botswana. Will include details on appearance, habits, foodplants and distribution.
Botswana, inverts

List of reptiles and amphibians from Angola, with records from the upper Zambezi.
Angola, herps

Detailed records of collections made during an expedition.
Malawi, Mozambique, mammals

Back to Contents


532. Lawton, R.M. (1959). A pollen analysis of the Lake Bangweulu peat deposits. *The Northern Rhodesia Journal* 4: 33-43. Account of research into recent pollen deposits of Lake Bangweulu. A brief description of present vegetation is given. Relative proportions of pollen of different groups are listed, and it is shown that *Syzygium* swamp forest covered in the past what is now sudd. Zambia, Bangweulu, plants

533. Lawton, R.M. (1963). Paleocological and ecological studies in the Northern Province of Northern Rhodesia. *Kirkia* 3: 46-76. Study of the present vegetation of part of N Zambia, including the Bangweulu swamps. The account includes descriptions of vegetation types and ecological relations. Remnant vegetation types are described. Results from pollen analysis provide suggestions on previous vegetation cover. Lists of woody species from various types are given. Zambia, Bangweulu, vegetation, plants


541. Long, R.C. (1967). The birds of the Port Herald district (Part IV). *The Ostrich* 38(1): 37-45. Continuation of the checklist of birds from the Nsanje area of the Lower Shire giving an up-date over the period 1957-62. 110 species are mentioned, including 65 waterbirds. Malawi, LShire, birds


Additional notes on a checklist of birds from the Nsanje area of the Lower Shire, covering 76 species including 8 waterbirds. Notes are given on individuals seen and location.
Malawi, LShire, birds

N/S
LMalawi, Malawi, inverts

N/S
LMalawi, Malawi, inverts

Detailed record of species collected during an expedition, 25 of which are from the lower Shire valley.
Malawi, Mozambique, LShire, herps

Detailed record of species collected during an expedition including 4 species from the lower Shire.
Malawi, Mozambique, LShire, herps

Detailed records of collections made during an expedition including 5 species from the lower Shire.
Malawi, Mozambique, LShire, herps

Conclusions of expedition to SW Tanzania and Malawi, with table of montane and forest amphibians.
Malawi, herps, birds

Account of cichlid fishes worldwide, with a section on the species of the Zambezi system. The Zambezi has a higher proportion of cichlids (22 spp.) than the Niger or Zaire. The various types are discussed and the differences in upper and lower Zambezi habitats brought out.
SAfrica, fish, biogeography

Account of the evolutionary origins, significance and diversity of the fish fauna of East Africa lakes, including Lake Malawi. The evolutionary importance of the endemic fauna is highlighted, and the threats to its conservation pointed out.
Malawi, LMalawi, fish, biogeography, conservation

N/S. List of species from a collecting trip to Botswana, including from the Chobe/Linyanti swamps.
Botswana, inverts

Back to Contents

List of fish recorded from the Zambezi basin; now out of date.
Zbasin, biogeography, fish

N/S
Mozambique, Cabora, probespp, plants

Compiled thesis (5 papers) describing the dynamics of the aquatic shoreline vegetation of Lake Kariba. It shows an ecological gradient from the Zambezi river inlet to the Sanyati basin, reflecting the hydrological gradient of the lake.
Zimbabwe, Kariba, vegetation, inverts
Account of the effects of the creation of Lake Kariba, with particular reference to fisheries and fish composition. 
Zimbabwe, Kariba, human, fish

Account of the submerged aquatic plants of Lake Kariba, with sections on species diversity, distribution, zonation, and the biology and production of *Lagarosiphon ilicifolius*. A total of 7 submerged species have been recorded, a low number possibly resulting from annual lake level fluctuations. 
Zimbabwe, Kariba, vegetation, plants

Account of the distribution and abundance of benthos in relation to that of aquatic plants. Lists of molluscs and submerged plants are given. 
Zimbabwe, Kariba, vegetation, inverts, plants

Popular account of birdwatching in the E Caprivi. Many bird species are mentioned. 
Namibia, Chobe, birds

Field guide that gives distributions, status and biology of all species south of the Cunene-Zambezi. 
SAfrica, birds

N/S 
Zimbabwe, Kariba, inverts

N/S 
Zimbabwe, Kariba, vegetation

Study of the plants of the Lake Kariba shoreline around the Mwenda estuary, N Zimbabwe. Three zones are described, a *Ludwigia* zone of dicotyledons and Cyperaceae closest to the water, a *Laggera* ecotone zone comprising a mixture of species from zones both above and below, and a *Gramineae* zone closest to the still-existing mopane woodland. Floating colonies of *Salvinia molesta* with *Typha latifolia* or *Phragmites australis* are sometimes seen. A list of species from each zone is given. Zonation corresponds to lake level movements, and is also affected by intensity of wave action, gradient of shoreline, the presence of deposited *Salvinia* mats, and game activity. The colonizing ability of *Panicum repens* is described. 
Zimbabwe, Kariba, vegetation, plants

Lists crustacean zooplankton species from Lake Chivero, Mazoe Dam and Connemara Dam, Zimbabwe. 
Chivero, Zimbabwe, plankton

Survey of aquatic plants on the Kafue Gorge dam soon after its formation. Some possible methods of control of aquatic weeds, particularly *Vossia* and *Aeschynomene*, are discussed. 
Zambia, Kafue, plankton, plants

Study of the impacts of endosulfan spraying on both savanna and wetland vegetation in W Zambia along the Kwando river. Few deleterious effects were recorded. 
Barotse, Zambia, water, human, inverts

Study on snail vectors of trematode worms in the Kafue Gorge dam. The 4 common snail species all carried flukes. 
Zambia, Kafue, inverts
Gives a list of crustacean zooplankton species found in Lake Kariba with population densities. The distribution of plankton is linked to river inflow.
Zimbabwe, Kariba, plankton

Preliminary checklist of 71 species of aquatic planktonic crustacea from various sites in Zambia.
Zambia, plankton

N/S. Analysis of plankton samples from Lake Bangweulu showing spatial distribution of species. This could be linked to water chemistry and land use patterns.
Zambia, Bangweulu, plankton, water

Limnological study of Lake Kafue showing 3 zones (gorge area, floodplain and transition). Model based on nutrient status and sewage input suggests eutrophication is looming. Results on the chemical composition of the waters, and zooplankton and phytoplankton composition are given.
Zambia, Kafue, plankton, water

N/S. Account of reduction in eutrophication in Lake Chivero as seen from plankton data. Zooplankton was a useful tool for the evaluation of eutrophication. Changes in its spatial and temporal composition were related to nutrient inflows and nutrient status of the lake. Zooplankton are unable to graze on colonial phytoplankton species that develop in eutrophic water.
Chivero, Zimbabwe, water, plankton

Consultants' report critically reviewing a recent publication on the impacts of DDT on biota. The effects on organisms and ecology of DDT in the Zambezi valley are identified and shown to be not insubstantial.
Zimbabwe, Kariba, water, human

Popular account of the geology, ecology and natural history of the Kalahari with detailed chapter on the Okavango swamps and reference to Chobe-Linyanti system.
Botswana, Okavango, Namibia

Popular account of the geology, ecology and natural history of the Zambezi river from source to mouth.
Zbasin

Brief account of a survey of Wattled Cranes in the Kafue Flats. The species is largely confined to floodplains and dambos. An aerial census was done in the central part of the Kafue Flats in June 1988 and 663 cranes were recorded (estimated population 2724). Changes in the flooding regime, disturbance by cattle and an increase in fishermen and boats have reduced breeding intensity.
Kafue, Zambia, birds, conservation

N/S. Zambia, Bangweulu, inverts

N/S. Malawi, LMalawi, inverts

N/S. SAfrica, inverts
581. Mandima, J.J. (1997). Some limnological aspects of Lake Cahora Bassa, Mozambique. *Transactions of the Zimbabwe Scientific Association* **71**: 14-18. Comparative survey of water quality (nutrients, dissolved oxygen) and zooplankton of Lake Cahora Bassa. Nutrient concentration was higher than in Lake Kariba, but zooplankton composition was similar, although numbers appear to have decreased since the early 1980s. Mozambique, Cahora, water, plankton


591. Marshall, B.E. (1995). Why is *Limnothrissa miodon* such a successful introduced species and is there anywhere else we should put it? In: *The Impact of Species Changes in African Lakes* (editors T.J. Pitcher & P.J.B. Hart). Fish and Fisheries Series No. 18. Chapman & Hall, London, UK. pp. 527-545. Account of the introduction of kapenta into Lake Kariba and the species characteristics that have made it so successful. *Limnothrissa* introduction was successful because it occupied a vacant niche, has a high reproductive ability and can change its life history to suit conditions. Its ecological effects include an increase of some predatory fish species, major changes to the structure of zooplankton, and possible alteration of nutrient cycling patterns. Further introductions should be limited to man made lakes, as it could cause extensive unpredictable changes in natural lakes. Zimbabwe, Kariba, fish


594. Marshall, B.E. (1998). *Serranochromis macrocephalus* in the middle Zambezi river: further evidence of the importance of hydroelectric power stations to the downstream movement of fish species. *South African Journal of Science* 94: 86-88. Describes the discovery of *Serranochromis macrocephalus* downstream from Lake Kariba in relation to its spread within the lake, and emphasises the fact that this species could only have invaded the river via the hydroelectric turbines. Zimbabwe, fish, Kariba


600. Masundire, H. (1989). Zooplankton composition and abundance in relation to water transparency and predation in Lake Kariba. *Archiv für Hydrobiologie Beiheft. Ergebnisse Limnologie* 33: 513-520. Account of zooplankton collected from Lake Kariba. 40 species of rotifers, 9 cladocerans, 4 cyclopoids and 3 calanoids were found in the five basins of the lake. Zooplankton abundances decreased along the lake towards the dam wall. The study attempts to relate zooplankton species composition and abundance to predation by *Limnothrissa miodon* and water transparency. Zimbabwe, Kariba, plankton, water

601. Matthes, H. (1968). The food and feeding habits of the Tiger-fish, *Hydrocyon vittatus* (Cast., 1861) in Lake Kariba. *Beaufortia* 15(201): 143-153. Account based on stomach contents and laboratory studies of the food of tigerfish in Lake Kariba. Results are tabulated. Tigerfish are the main and most efficient predators of the lake; the effects of predation are mostly seen on small and young fish, including commercial species. Zimbabwe, Kariba, fish

602. Matthissen, P. (1985). Contamination of wildlife with DDT insecticide residues in relation to tsetse fly control operations in Zimbabwe. *Environmental Pollution (B)* 10: 189-211. N/S Study shows the impacts of DDT application in the area around Lake Kariba. There appears to be a reproductive failure in migratory fish, and effects on hippo, predatory birds and bats. Zimbabwe, Kariba, water, fish, mammals, birds

603. McCarthy, T.S. (1992). Physical and biological processes controlling the Okavango Delta - a review of recent research. *Botswana Notes & Records* 24: 57-86. Study on the nature of the processes underpinning the Okavango delta. These are said to be external (graben faulting, geology, sedimentation) and internal variables (basic). Plant communities regulate the dispersal of sediment and water, thus many of the features seen today are biologically controlled through vegetation and blockages. Botswana, Okavango, water, vegetation


612. McLachlan, A.J. (1975). The role of aquatic macrophytes in the recovery of the benthic fauna of a tropical lake after a dry phase. *Limnology & Oceanography* **20**(1): 54-63. Account of saline Lake Chilwa and changes in its plant and invertebrate composition. Two types of macrophytes are present - permanent (*Typha*) and temporary (*Aeschynomene* and *Diplacne*). Their roles in the recovery of the lake ecology are considered. Faunal experiments on salinity tolerance and competition are described.


Detailed accounts of the status of crane species with suggested conservation actions. Includes chapters on the Wattled and Grey Crowned Cranes, with current and priority conservation measures.
SAfrica, conservation, birds

Compilation of all available information on the resources and environment of the Caprivi, including a detailed vegetation map.
Namibia, Chobe, human, agriculture, vegetation, water

Report of a major investigation into the ecology of the pelagic waters of Lake Malawi. The 13 chapters cover the ecology of phytoplankton, zooplankton and fish. Fisheries potential is discussed.
Malawi, LMalawi, human, fish, plankton

N/S

N/S
Botswana, Okavango, water, fish

N/S
Botswana, Okavango, water, fish

Account of the effects of insecticide spraying on fish populations in the Okavango. Endosulfan was found to have undesirable effects, particularly in shallow floodplains, while deltamethrin was less toxic.
Botswana, Okavango, water, fish

Account of reptiles and amphibians from SC Africa, including Lake Bangweulu and the Chambeshi River.
Zambia, Bangweulu, herps

Brief overview of the Kafue basin from a conservation perspective. The basin is 154,000 km² in size and contains 3 National Parks (Kafue, Lochinvar and Blue Lagoon).
Zambia, Kafue, conservation

List of 132 fish species (including 10 introductions) found in Zimbabwe, including new records. The river systems they occur in are shown: 74 species are from the upper Zambezi, 61 from Lake Kariba, 53 from the mid Zambezi, and 48 from the lower Zambezi.
Zimbabwe, biogeography, fish

Brief popular article describing the ecological features of the Zambezi from source to delta.
Zbasin, fish

Early report on suitability for livestock production of a large part of the Zambezi valley in Mozambique. The natural vegetation is described under 18 types, and under 5 veld types. Maps of the different types are provided.
Mozambique, agriculture, vegetation

Brief account of the natural history of some reptile species in the lower Shire.
Malawi, LShire, herps
630. Mitchell, B.L. (1963). A first list of plants collected in the Kafue National Park. The Puku 1: 75-191. Following a brief account of vegetation types of the southern part of the Kafue NP, a checklist of 708 species is given with notes on habitat and forage use. A list of vernacular names is also presented. Zambia, Kafue, plants


637. Mitchell, D.S. (1969). The ecology of vascular hydrophytes on Lake Kariba. Hydrobiologia 34(3/4): 448-464. Account of the various types of aquatic plants found in or on Lake Kariba. Sudd formation is described, as is the possible development of vegetation. The importance of Salvinia is outlined. Zimbabwe, Kariba, vegetation, probssp, plants


642. Mitchell, S.A. (1976). The marginal fish fauna of Lake Kariba. Kariba Studies 8: 109-162. Account of fish living around the margins of Lake Kariba. Vegetation type and fish biomass were related, with the highest biomass under Salvinia mats. The effects of water depth and changes in lake level on fish are discussed. Stomach contents of various fish species are listed. Zimbabwe, Kariba, fish
Study on the damage caused by trampling and grazing by hippo of maize and rice crops around the Elephant Marsh, S Malawi. Malawi, LShire, probssp, mammals

First record of a fish previously unrecorded from the Zambezi. Zimbabwe, fish

Brief review of knowledge on the mangroves of southern Africa. The east and west coast mangroves form two groups, and each group shows clear vegetation zonation related to water depth. Mozambique, Delta, vegetation

English version of a study on the phytoplankton of the Mozambique par of Lake Malawi. The study looked at diatom productivity and composition. Descriptions of 38 species and varieties are given, along with photos. Mozambique, LMalawi, plankton

Account of links between the proto-Upper Zambezi and the Limpopo as shown by distribution of some woody plant species. The palaeo-geomorphology is described. Zambia, plants, biogeography

Account of research on the section of the Zambezi to be flooded by Lake Cabora Bassa, with particular reference to the fish. Nutrient status and flush are discussed. 34 fish species are listed, although few are of commercial interest. Lists of plants, zooplankton, phytoplankton and aquatic mammals are also given. Cabora, Mozambique, plankton, plants, fish

Book comprising 12 detailed chapters on sediments, nitrogen budget, phytoplankton, zooplankton, vegetation, aquatic plants, benthic fauna, crocodiles, birds and energetics. Zimbabwe, Kariba, water, vegetation, herps, fish, birds, plants, invert, plankton

N/S. Should contain a list of fish species and their distribution in Zambia, perhaps with biological notes. Zambia, fish

N/S. Malawi, MShire, water

Account of the levels of various nutrients (ions) in a closed drying lake. These are thought to derive from saline inflows. There is an alternation between high ion concentrations in the dry season, and lower concentrations in the wet season. On filling the lake experiences a flush of nutrients, which results in a productive fishery. Malawi, MShire, water

Collection on 13 papers on the eutrophication and pollution of Lake Chivero in the Zambezi catchment. Solutions to these problems are presented. Chivero, Zimbabwe, water, human

Study on oxygen and nutrient levels in the Mukuvisi river after the discharge of sewage effluent. Lists of benthic invertebrates, zooplankton, phytoplankton and plants are given. The fauna and flora is characteristic of eutrophic waters, and the river is being degraded. Chivero, Zimbabwe, water, plankton
655. Mphande, J.N.B. (1987). The status of the Nile Crocodile in Malawi. Department of National Parks and Wildlife, Lilongwe, Malawi. Results of a survey giving estimates of 4600-15,000 crocodiles in Malawi, of which 45% are in the Elephant Marsh. Results seem much higher than others (e.g. Bruessow 1989). Malawi, LShire, herps


658. Muldoon, G. (1957). The Trumpeting Herd. Rupert Hart-Davis, London, UK. 182 pp. Anecdotal accounts of large mammal populations in S and C Malawi during the 1950s. Massive declines in elephant, other large herbivores and large carnivores are described and documented. This was mainly to allow agricultural development. The first chapter records heavy settlement and cropping along the lower Shire, especially in the Elephant Marsh, in mid 1950s. Also notes that the birdlife in the lower Shire had also declined considerably since the initial descriptions by Livingstone. LShire, Malawi, birds, mammals


663. Musando, B. (1996). Inshore fish population changes in the Zambian waters of Lake Kariba from 1980 to 1995. MPhil thesis, University of Bergen. Bergen, Norway. 74 pp. Description of inshore fish community structure principally on the Zambian side of Lake Kariba. Study looks at exploited stocks and relates that to annual lake levels and intensity of fishing activities using time-series gillnet data collected from 1980-1995. Hydrological regimes were found to influence inshore fish communities on both sides of the lake, but the population sizes on the fished Zambian side were less than those on the unexploited Zimbabwe side. Lake Kariba is said to have 51 species of fish. Zambia, Kariba, fish, water

664. Muyanga, E.D. & Chipungu, P.M. (1982). A short review of the Kafue Flats fishery, from 1968 to 1978. In: The consequences of hydroelectric power development on utilisation of the Kafue Flats (editors G.W. Howard & G.J. Williams). Kafue Basin Research Committee, University of Zambia, Lusaka, Zambia. pp. 105-113. Account of the effects of dam construction on the fisheries of the Kafue Flats. 21 fish species of commercial significance are listed. Changes in relative abundance as a result of the Kafue Gorge dam are described. Fish catches have increased since impoundment, probably owing to increased oxygen and nutrient content of the water. Zambia, Kafue, fish, water


669. Nefdt, R.J.C. (1996). Reproductive seasonality in Kafue lechwe antelope. *Journal of Zoology, London* 239: 155-166. Study on time of mating in lechwe on the Kafue Flats after changes in the time of flooding related to recent hydroelectric schemes. Lechwe primarily mated when water levels were increasing and inundating potential food supplies, although this now takes place at a different time of year from before impoundment. Calving thus occurs when floods are receding and fresh grass becomes available. Zambia, Kafue, mammals, conservation


Detailed account of the geological features of Lake Malawi with particular reference to changes in water level. The significance of these changes in the evolution of cichlid fishes is discussed.
Malawi, Lake Malawi, biogeography, fish

List and brief descriptions of 29 species of frog collected from the lower Zambezi.
Mozambique, Delta, herps

Study on rate of change in tree canopy in woodlands in N Botswana using air photos and fieldwork. There was a significant reduction in canopy in woodlands with a high concentration of elephant, particularly *Acacia erioloba* woodland.
Botswana, Chobe, Okavango, mammals, vegetation, conservation

Account of the phytoplankton species of Lake Malawi with data on seasonal abundance and distribution. Lists of phytoplankton species collected are given.
Malawi, Lake Malawi, plankton

Main vegetation survey of the country with detailed descriptions. The map (scale 1:2 million) shows 117 vegetation units. The map has been revised slightly for Flora Zambesiaca (Wild & Barbosa 1967).
Mozambique, vegetation

Account of conservation categories regarding birds in Botswana based on recent publications. Slaty Egret, Cape Vulture and Wattled Crane are considered at greatest risk of extinction.
Chobe, Okavango, Botswana, conservation, birds

Detailed atlas of bird distribution in Botswana. Book has analysis of distribution data and a discussion of factors affecting bird distribution. Atlassing was done from July 1980-June 1990 by half-degree squares. 7 squares cover the Chobe-Linyanti, with numbers of species per square varying from 15-405 (Kasane). 12 waterbirds are mapped in this region and an extra 9 as 'rarities'.
bio geography, Botswana, birds

Annotated list in Italian of some species of snakes and lizards collected from Barotseland.
Zambia, herps

Country accounts of annual results of waterfowl counts. 1640 waterfowl were recorded in the Elephant Marsh (Malawi) in January 1992.
Malawi, LShire, birds

Description of dambos in Zambia, their characteristics, ecology and potential for agricultural use. Dambos cover 5% of Zambia (37,000 km²). Species present are principally determined by the considerable seasonal fluctuations in water level. The main seepage zone is often dominated by the grass *Loudetia simplex*, the upper wash zone by *Hyparrhenia* spp., and the lower wash zone by *Setaria sphacelata* and *Typha*. Dambos can also be described on the basis of soil pH as sour (4-5.5), intermediate (5.5-7) or sweet (7.8).
Zambia, agriculture

Detailed records of bird collections made during an expedition.
Malawi, Mozambique, LShire, birds

N/S. Earliest publication on East African mammals with descriptions of new species from coastal Mozambique and report on a collection from Tete. Contains notes on natural history.
Mozambique, mammals


728. Proctor, J. (1980). The macrophytic vegetation of Bangula Lagoon, Malawi. Kirkia 12(1): 141-149. Description of the aquatic vegetation of Bangula lagoon in the lower Shire. The lagoon is filled seasonally and has the potential for fish production. Its depth varies from 1-3 m, and its extent from 200-1500 ha. The most important floating or submerged plants are Ceratophyllum demersum, Nymphaea petersiana and Pistia stratiotes. The most important sudd or swamp species are Echinochloa pyramidalis, Ludwigia stolonifera, Panicum subalbidum and Phragmites mauritianus. There is a fringing marsh dominated by Cyperus spp.


Zimbabwe, Malawi, vegetation

A vegetation survey of Zimbabwe, Zambia and Malawi, based on the survey of Zimbabwe by Rattray (1962). The map was published separately as part of the Federal Atlas (1960). There are 29 vegetation types, grouped into 6 physiognomic units, basically following the Yangambi system. The wetlands of the Barotse floodplains are mapped as *Loudetia* grassland dominated by *L. simplex*, replaced by *Tristachya* in the Sihuwana Plains. The smaller and wetter plains of central Barotseland often contain *Miscanthidium*. The Kafue floodplains are classified as swamp and papyrus sudd, surrounded by *Hyparrhenia* grassland with *H. rufa* and *Setaria*. Suudd normally comprises the grasses/sedges *Cyperus papyrus*, *Vossia cuspidata*, *Scirpus cubensis*, *Echinocloa pyramidalis*, *Pennisetum purpureum*, *Miscanthidium tetorifolium*, *Eleocharis plantaginacea* and *Echinocloa stagnina*. The floodplain of the Shire river is classified as swamp and papyrus sudd. *Zbasin*, vegetation


Popular report on ecology of the Kafue Flats with emphasis on lechwe. Concern is expressed over hydroelectric developments which will drastically change the hydrological regime. Zambia, Kafue, conservation


Account of digestibility studies on lechwe on the Kafue Flats using collected rumen fluid. Zambia, Kafue, mammals


Account of the effects of the Kafue flood regime on the lechwe at Lochinvar NP. Time, speed and duration of flooding are important factors in lechwe ecology. The Itezhi-tezhi dam will reduce extremes and duration of flooding and the floristic composition of the floodplains. This may cause lechwe mortality owing to reduced appropriate forage. Zambia, Kafue, conservation, mammal


Account of the physical characteristics, including soils, of Lochinvar NP, Kafue Flats. Fluctuations in flood water levels are given. A vegetation map with 10 units is presented; variation is attributed to hydrological differences. A list of 55 herbaceous plants is included. Zambia, Kafue, vegetation, plants


Account of the grassland and grasses of Lochinvar NP. Composition and productivity of grazed areas is described, and the effects of heavy grazing noted. Digestibility and nutritive values are given. Zambia, Kafue, vegetation, mammals


Account of the ecology of the Kafue Flats regarding lechwe. A vegetation map of Lochinvar is included. Zambia, Kafue, vegetation, mammals


N/S. Classic account of the cichlids of Lake Malawi, with many original descriptions. Malawi, LMalawi, fish


N/S Mozambique, inverts


Account of the rock-dwelling cichlid fish species of Lake Malawi with emphasis on endemism and distribution around the lake. Distribution and diversity are related, and the genus is suggested as the appropriate conservation level. Malawi, LMalawi, biogeography, conservation, fish


Report on the plants (principally grasses and sedges) of the Bangweulu swamps, with 181 species listed by vegetation type and family. Zambia, Bangweulu, plants


Review of the reasons for diversity of cichlid fish species in Lakes Malawi, Victoria and Tanganyika. The very high diversity is ascribed to narrow niche specialisation, diversity of niches (seasonality, depth, substrate, oxygen levels) and high investment in few offspring, features which are possible in stable environments. However, this makes the species vulnerable to man-made changes such as mechanised fishing and alien introductions. Chapter contains many references. Malawi, LMalawi, biogeography, fish
N/S. Detailed account of a survey on the ‘mbuna’ group of cichlids living along the rocky shores of Lake Malawi.
Malawi, LMalawi, fish

N/S. Considered a classic account on the fish of Lake Malawi with valuable historical data.
Malawi, LMalawi, human, fish

Study of phytoplankton found in Lake Chivero, with an account of its productivity and the importance of nutrient limitation. Variation in composition is seen throughout the year. An appendix gives a partial list of 13 species.
Chivero, Zimbabwe, water, plankton

Account of bird diversity and patterns in Namibia. There are 644 bird species; overall diversity is greatest in the northeast where riverine and wetland habitats are present. The Caprivi area is one of the most important for conservation of Red Data species.
Namibia, birds

Study of the Kafue lechwe on Lochinvar Ranch covering reproduction, weights and measurements, and diseases/parasites.
Zambia, Kafue, mammals

Survey of large mammals in the Caprivi. The Mamili swamps between the Kwando and Linyanti rivers, is now a National Park and the largest protected wetland in Namibia (360 km²). Up to 80% is flooded during high floods. Transect counts of large mammals showed 640 elephant (density c.1.8/km²), a small but stable population of buffalo (1170), and lechwe (1033), hippo (470), kudu (30), reedbuck (40), and some goats.
Namibia, Chobe, mammals

Illustrated identification guide to some trees of the Okavango, with notes on ecology, uses and history.
Botswana, Okavango, plants

Brief annotated list in French of various reptile species found in Barotseland.
Zambia, Barotsch, herps

Detailed account of the taxonomy, distribution, movements, habitat, breeding biology and physical features of a subspecies of duck.
SAfrica, birds

General account of the effects of DDT and endosulfan application on the aquatic ecology of the Okavango delta. Preliminary results suggest effects are not too serious.
Botswana, Okavango, water, fish, inverts

Study on diversity of spiders in two habitats (floodplain grassland and mopane woodland) in the Okavango delta. 135 species are listed.
Botswana, Okavango, inverts

N/S Botswana, Okavango, water, inverts

Brief account of mangroves in Mozambique. There are six species of mangroves; the extent of mangrove forest is 850 km².
Mozambique, Delta, vegetation
General discussion on the biodiversity and conservation of fish stocks in Lake Kariba, including aspects such as regulation, over-fishing and the introduction of exotic species. A list of fish species is given.
Zimbabwe, Kariba, human, conservation, fish

N/S. The squeaker, *Synodontis zambezensis*, has increased in abundance in Lake Kariba. This paper describes this increase and explores its causes.
Zimbabwe, Kariba, fish

Account of the diet of a catfish from the S shore of Lake Kariba. Although facultative, the species principally feeds on molluscs (a food resource presently little utilized by other species), and also selects for chironomid larvae and termites when available. Details of food preferences are given.
Zimbabwe, Kariba, fish

First account of this species being found in the mid-Zambezi system, although it is known from the upper Zambezi.
Zimbabwe, Kariba, fish

Account of the effects of fishing on fish populations. Some differences were noted but data are equivocal.
Zimbabwe, Kariba, human, fish

Account of the numbers and status of Kafue lechwe from 1953 to 1972. A stable population of 94,000 is suggested for the early 1970s. Analysis of the age structure of the population suggests that it will decline under an altered flooding regime.
Zambia, Kafue, mammals

Account of the invasion of *Salvinia* on Lake Kariba.
Zimbabwe, Kariba, probsp, plants

N/S
Zambia, Kafue, conservation

Brief report on the occurrence of the introduced biological control beetle *Cyrtobagous* on *Salvinia* in E Caprivi. It was shown to be widespread and established, but population densities are low.
Namibia, Chobe, probsp, inverts

Account of problems with *Salvinia molesta* in the E Caprivi and the methods used to control it. Details are given on growth rates.
Namibia, Chobe, probsp, plants

Study of growth rates of *Salvinia* on Lake Liambezi and on the Chobe river. Doubling times on the Chobe were 8.6-15.8 days (4.4-8.5% per day), but much lower on Lake Liambezi, possibly owing to a deficiency of nitrogen.
Namibia, Chobe, probsp, plants
Account of the largest of Namibia's wetlands, covering 5000 km². The E Caprivi wetlands are divided into 5 zones - lower Kwando river, lower Kwando and Linyanti swamp, Lake Liambezi, Chobe marsh, Zambezi and Chobe floodplains. In wet years they all join up. Conservation concerns include invasion (now controlled) by *Salvinia*, poaching, large cattle populations and overfishing. Wildlife (sitattunga, lechwe) are about 10% of their 1980 numbers. An appendix of 90 species of aquatic and marsh plants is given.
Namibia, Chobe, water, conservation, plants, birds, mammals

Account of a study on the gut contents of 7 species of duck from Lake Chilwa. Most food items were seeds; also some leaves, algae and insects.
Malawi, MShire, birds

Describes social behaviour and the lek mating system of Kafue lechwe in Lochinvar NP, and identifies threats should wetland habitat be changed. Priorities for management are noted.
Zambia, Kafue, conservation, mammals

Account of the effects of dam construction on the breeding of lechwe. The highly-specialised antelope uses natural flooding as a trigger for breeding, and breeding success is now liable to decline.
Zambia, Kafue, conservation, mammals

Study on the distribution of termite in various habitats within Moremi, Okavango. The highest density was found on floodplain grassland. It is suggested that distribution is not regular, and not density-dependent.
Botswana, Okavango, invert

A comprehensive checklist of birds, primarily from the South Luangwa and Luambe NPs below the 900 m contour. Brief notes of habitats are given. 731 species are listed with brief notes on abundance and distribution. A bibliography and gazetteer are included.
Luangwa, Zambia, birds

Detailed account of the distribution and status of swans, geese and ducks in Africa. 14 species of duck in the Zambezi basin are included, each with a full map. Also indicates 3 categories of 'key sites' where 1%-2%, 2%-10%, and >10% of the 'flyway' population has been counted. Only one such site (Kafue Flats) is listed in our area. (Three palearctic migrants plus Maccoa Duck are said not to occur).
SAfrica, biogeography, birds

Account of southern African caddis flies, including from the Zambezi river.
SAfrica, invert

Detailed account of the physical environment of the part of the Middle Zambezi later flooded by Kariba Lake with an account of the life of the Valley Tonga people and how they utilized this environment. Includes brief sections on vegetation and fauna, and a list of plants used.
Zimbabwe, Zambia, Kariba, human, agriculture

Authoritative and detailed account of the proposed Southern Okavango Integrated Water Development Project, which resulted in the Botswana government abandoning the controversial proposal. The report principally covers hydrology and water resources, and social and economic considerations, and offers suitable development alternatives. Although the Okavango is not directly part of the Zambezi basin, the report is a good model of studies that could be carried out, and addresses similar issues to those found in the Zambezi.
Botswana, Okavango, water, vegetation, human

Brief account of the Lukanga swamps on the upper Kafue. A few plant species are mentioned; *Phragmites* reed is the most common species.
Zambia, Kafue, plants

Account of a survey of the lake from the early-mid 1970s. It is 101 km² in extent, shallow and reed-fringed. The water was clear and oxygenated, and slightly alkaline. Fishery potential is good, but threatened by *Salvinia* encroachment. Data on water temperature, oxygen levels and chemical analyses are presented. A list of phytoplankton species is given, along with some data on zooplankton and fish.

Namibia, Chobe, water, fish, plankton


Popular magazine article on the negative effects of a commercial fishing project on subsistence fishing in the Okavango River.

Botswana, Okavango, conservation


N/S

Malawi, LShire, fish


Report on nearly 2000 specimens of 30 species collected in various parts of Zambia between 1966 and 1970. Wetland habitats from which specimens were collected include Kafue Flats, Kafue Gorge, Kafue NP and South Luangwa NP.

Zambia, mammals


Survey of mammals along the Chobe river. 16 ungulate, 2 primate and 4 carnivore species were noted, with distributions and habitats. Numbers declined at the beginning of the rains as migratory species left. There may have been changes in species composition since 1969.

Botswana, Chobe, mammals


Account contrasting small mammal populations, principally rodents, on the Chobe floodplains and Kafue Flats. Total populations were higher on the floodplain than on the surrounding high round, perhaps owing to higher grass productivity.

Botswana, Chobe, mammals


Description of the Kafue Flats and its vegetation. The utilization by mammals (especially rodents), birds and other animals (including ants and termites) is described. Lechwe are the principal users, perhaps because of lack of suitable habitat and food for other species.

Kafue, Zambia, mammals, inverts


Account in Portuguese of the shrimp fishing industry off the Sofala Bank, Mozambique, mostly focussing on *Peneaus indicus*. Figures on yield and catch per unit effort are given, along with a discussion on the relation between stock and recruitment. Yields decreased between 1974 and 1986 owing to decreased stock.

Mozambique, Delta, human, inverts


Brief account of the potential of herps, particularly crocodiles and turtles, for utilization in Zambian wetlands.

Zambia, herps, human


Checklist of 38 species of reptile and 26 amphibians collected in Lochinvar NP on the Kafue Flats, with indications of habitat.

Zambia, Kafue, herps


Account of areas in Namibia considered important for bird conservation, including (within the Zambezi Basin) the East Caprivi wetlands. Species of particular interest are mentioned.

Namibia, birds, conservation


24 papers on Namibian wetlands. One on E. Caprivi. Others on biota and issues.

Namibia, Chobe, conservation


802. Smith, P.A. (1969). Report on (1) a search for the aquatic weed Salvinia auriculata Aubl. in the Kwando, Linyanti and Savuti rivers and the Selinda Spillway and (2) a herbicide spraying experiment and other measures to control the Salvinia infestation at Shaile on the Linyanti river in north-western Botswana, January-May 1969. Unpublished report, Department of Veterinary Services & Tsetse Control, Maun, Botswana. 18 pp. One of the first detailed reports on the distribution and ecology of Salvinia in the Kwando-Linyanti-Chobe system. Reviews current findings. Also includes early results on control, including herbicide spraying and physical methods.

Botswana, Chobe, prospp, plants


Botswana, Okavango, vegetation, plants


Botswana, plants


Botswana, Chobe, prospp, plants


Botswana, mammals


SAfrica, mammals


Zimbabwe, birds


816. Sommerlatte, M.W.L. (1976). A survey of elephant populations in north-eastern Botswana. Field Document 2. FAO/Department of Wildlife, National Parks and Tourism, Gaborone, Botswana. 100 pp. Study on elephant distribution in relation to vegetation and availability of surface water, looked at seasonally in 1973-75. Estimated total elephant population was 5746, with a mean density of 0.5 elephants/km². In an exceptional dry season a concentration of 4.6/km² was reached along the Chobe waterfront. The Chobe NP is a wet season dispersal area. Favoured vegetation types for elephant are the *Terminalia/Burkea* and *Baikiaea* woodlands, while *Acacia* woodlands are used more in the dry season. Mopane woodland is intermediate, and grasslands are of minor importance. The Linyanti, Chobe, Savuti and Shinamba areas suffer high tree mortality from elephant, coupled with the effects of fire. Recommendations include reduction in elephant population sizes and encouragement of regeneration of some *Acacia* woodlands. The report includes a simple vegetation map. The edaphic grasslands of the Chobe floodplain are said to be important for lechwe and puku, but there is also some elephant utilization. The perennial swamps along the Linyanti river are little used except by sitatunga and lechwe, which inhabit the islands. Botswana, Chobe, mammals


819. Stewart, M.M. (1967). *Amphibians of Malawi*. State University of New York Press, New York, USA. 163 pp. 57 species of amphibian are recorded from Malawi, of which about 22 are recorded from the lower Shire. Notes on biology are given along with identification keys. Malawi, herps


Consultants’ report on the natural resources and environmental issues of much of N Botswana, including the Chobe/Linyanti area. Includes geology, soil and vegetation maps. 
Botswana, Okavango, agriculture, vegetation

Collection records and notes on mammals of Malawi. Around 15 are noted from the lower Shire. 
Malawi, mammals

An annotated list, with key, to the six species of tortoise, terrapin and turtle in Malawi. Species found in the lower Shire are mentioned. 
Malawi, herps

Collection records and notes on snakes of Malawi. Around 17 are noted from the lower Shire. 
Malawi, herps

Reference book on all vertebrates known in Malawi. Many biological and anecdotal records are given. 
Malawi, mammals, birds, fish, herps

Reference book on all invertebrates known in Malawi. Many biological and anecdotal records are given. 
Malawi, inverts

N/S 
Namibia, Chobe, conservation, probssp, plants

Survey of migrant birds known to occur in Zambia with documented sightings. 83 species of palaeartic migrant (37 waterbirds) and 81 species of intra-Africa migrant (27 waterbirds) are mentioned. 
Zambia, birds

Study of buffalo on the Kariba floodplain grassland. It looks at behaviour, nutritional requirements and reproductive ecology related to forage supply. On the floodplains forage was available into the dry season, and was thus a key resource. 
Zimbabwe, Kariba, mammals

Counts were made on the Chobe river in Botswana (955 birds of 23 spp) in January 1993, the Elephant Marsh in Malawi in July 1992 (422 birds of 36 spp) and January 1993 (402 birds of 27 spp), and the Kafue Flats in Zambia in January 1993 (estimated 132,900 birds of 87 spp). 
Zbasin, Chobe, LShire, Kafue, birds

Counts were made on the Chobe river in Botswana (4935 birds of 41? spp) in July 1993, the Elephant Marsh in Malawi in July 1993 (2549 birds of 34 spp), on the Kafue Flats in Zambia in July 1993 (73,975 birds of 63 spp) and in January 1994 (129,477 birds of 83 spp). 
Zbasin, LShire, Chobe, Kafue, birds

N/S 
Angola, plants

Brief account of the vegetation of Angola. Two conservation areas in the upper Zambezi area are very briefly described - Cameia NP and Lóvua Forest Reserve. 
Angola, vegetation, conservation
Account of the setting up of the Marromeu Buffalo Reserve and its present management. The reduction in poaching of large and small mammals and crocodiles since wildlife utilization for the benefit of the surrounding population was introduced is pointed out. Biomass yields are given. Mozambique, Delta, mammals, conservation, human

N/S
Barotse, Zambia, mammals

Account of black lechwe in the Bangweulu swamps. There was a major decline until 1970, followed by a rise in numbers to c.30,000. Illegal hunting now accounts for c.3000/year. Zambia, Bangweulu, conservation, mammals

Account of the reproductive biology of black lechwe in the Bangweulu swamps. Seasonal movements are outlined. Zambia, Bangweulu, mammals

N/S
Mozambique, mammals

A list of Tonga vernacular names of 400 plant species from the Mwenda river area, Binga on Lake Kariba. An alphabetical list of Tonga names with botanical equivalent is also included. Zimbabwe, Kariba, plants

N/S
Zambia, Bangweulu, plankton

Illustrated account of phytoplankton collected from Lake Kariba in 1959. Zimbabwe, Kariba, plankton

Account with lists of phytoplankton collected from Lake Kariba in 1968-70. Zimbabwe, Kariba, plankton

Detailed account of the distribution and abundance of the pelagic fish of Lake Malawi in 1992-93. Malawi, LMalawi, fish

Brief notes on 21 bird species from SW Zambia, including some associated with wetlands. Zambia, birds

Review article on wetland plant productivity, with particular reference to papyrus. Papyrus has an annual net productivity around 50-60 t DM/ha/year, even under low nutrient conditions; it shows tight nutrient cycling. Burning reduces nutrient levels, hence growth rates. An estimate of primary productivity of submerged macrophytes is 10-12 t DM/ha/year, and for phytoplankton 0.5 t DM/ha/year. Botswana, Okavango, vegetation, plants


853. Timberlake, J.R. (1996). Sites of interest for botanical conservation in the communal lands of the Zambezi Valley, Zimbabwe. Zambezi Society/Biodiversity Foundation for Africa, Harare, Zimbabwe. 52 pp. Consultants' report with account and descriptions of relatively small sites of interest for botanical conservation in the communal lands of the Zambezi valley in Zimbabwe. Some riparian sites on recent alluvium are described from along tributaries of the Zambezi. The only wetland described is a saline spring with Cyperus laevigatus and Sporobolus consimilis at Kanyemba. Zimbabwe, vegetation, conservation


856. Timberlake, J.R., Nobanda, N. & Mapaure, I. (1993). Vegetation survey of the communal lands - north and west Zimbabwe. Kirkia 14(2): 171-270. Account and map (scale 1:500,000) of the vegetation of the communal lands over much of the Zambezi catchment within Zimbabwe, using a phytosociological approach and satellite imagery. 37 vegetation types are described, grouped into 8 physiognomic/floristic classes. The floodplains of the Zambezi tributaries are mostly described under mixed riparian woodland or Faidherbia riparian woodland. Dambo grasslands at lower altitudes are classified as Cynodon-Eragrostis grasslands on sands or Panicum repens lakeshore grassland on Lake Kariba. Relationships to soils and other environmental factors are discussed. Manca, Zimbabwe, vegetation


Detailed and authoritative account of the Gorongosa ecosystem in the rift valley of central Mozambique, including part of the Zambezi delta and its hinterland. A holistic, landscape-guided, evolutionary approach is used, and the vegetation, large mammal populations and land use are described in this context. The vegetation is described in detail. Conservation of the ecosystem and its large mammals is discussed.
Mozambique, Delta, vegetation, conservation, mammals, plants

Account of the geography and geomorphology of the Marromeu-Gorongosa area. The vegetation of the different landscapes is described; and the conservation importance of the whole area is outlined.
Delta, Mozambique, vegetation, conservation

Popular account of national parks and reserves in Mozambique. Gorongosa (3770 km²) and Marromeu (1500 km²) are described. The latter has the largest concentration of buffalo (25,000) worldwide. A list of mammals, birds and reptiles is given.
Mozambique, Delta, conservation

Detailed account of the ecology, large mammals and conservation potential of the mid-Zambezi river between Zumbo and the proposed Cabora Bassa dam. Mammal populations were low, partly due to excessive hunting. The main animals were impala and kudu.
Mozambique, Cabora, conservation, vegetation, mammals

N/S
Zambia, Bangweulu, water

Account of exotic fish species introduced into rivers and dams in Zimbabwe, including those in the Zambezi basin.
Zimbabwe, fish

Account of soils, climate and vegetation types of much of Zambia. There are 7 Kalahari Sand vegetation types in Barotseland, each very briefly described. A map is included. There is a later revised edition (1957).
Barotse, Zambia, vegetation, agriculture

Fascimile account of 1937 report on soils, climate and vegetation types of much of Zambia. There are 7 Kalahari Sand vegetation types in Barotseland, each very briefly described. A map is included.
Barotse, Zambia, vegetation, agriculture

N/S. Includes vegetation map of Barotseland floodplains.
Zambia, vegetation, agriculture

Comprehensive systematic checklist of all birds recorded from Angola covering 1067 species/subspecies, with brief notes on distribution.
Notes on the history of ornithology and zoogeography are given, along with a detailed reference list and gazetteer. Bird lists from just across the border in Barotseland are also presented.
Angola, birds

Following an account of various areas in Kalabo and Ngamiland a list of 276 bird species is given with notes on distribution and habitat.
The zoogeography of Baotseland is discussed.
Barotse, Botswana, Chobe, Zambia, birds

Annotated checklist of 49 bird species from Kalabo, W Zambia, including 14 waterbirds.
Barotse, Zambia, birds

Account of 15 waterbirds which breed in Zambia with detailed breeding notes and maps.
Zambia, birds

Account of the status and movements of this migratory bird species in the Zambezi and Limpopo systems. The changes in distribution due to drought and dam-building are noted. Zimbabwe, birds


Account of the changes that occurred amongst a community of rock-dwelling cichlid fish living around an island in Lake Malawi when fish from other islands were introduced. The conclusions have important implications for the conservation of biodiversity in the lake. Malawi, LMalawi, conservation, fish


Review of the fisheries industry of Lake Malawi. Prior to 1986 endemic tilapia (chambo) fishing dominated, but the various fishing methods have resulted in over-exploitation. Endemic haplochromine fish now dominate the catch. Species changes are ascribed to changes in fishing methods used. Species introductions will not increase productivity.

Malawi, LMalawi, human, fish


Study of the impact of commercial trawling on species composition and community structure of haplochromine cichlids. Populations are declining and recommendations are given for conservation measures.

Malawi, LMalawi, human, fish


Account of changes in the size structure of cichlid fishes in Lake Malawi as a result of bottom-trawling, which may have implications for their conservation.

Malawi, LMalawi, human, fish


Account of changes in the size structure of cichlid fishes in Lake Malawi as a result of bottom-trawling, including data on changes in species composition. Results may have implications in fish conservation.

Malawi, LMalawi, human, fish


Report on the possible interactions between lake flies, water fleas (Cladocera) and pelagic fish such as kapenta, comparing Lakes Malawi, Kariba and Tanganyika. Lake Malawi has high numbers of lake flies and Cladocera, but few pelagic fish. This is compared to Lake Tanganyika which has high populations of pelagic fish (kapenta) but few Cladocera or lake flies. It is suggested the lake flies are an important food source for pelagic fish, and that Lake Malawi could support a high pelagic fish population.

Malawi, LMalawi, human, fish, inverts, plankton


Study on freshwater fisheries in Namibia. A good map of floodplains and swamps in the E Caprivi is provided. An overview of the hydrology and fisheries potential of the Kwanza, Linyanti, Lake Liumbezi, Chobe and Zambezi is given.

Namibia, Chobe, water, human, fish


Account of gillnetting experiments on Lake Malawi. Some fish species return up-river to spawn during the early rains, while other species tend to run up towards the end of the rains. Contains interesting data on fish breeding migrations, an aspect of fish biology which is poorly-documented. River fisheries are shown to be declining, perhaps owing to intensive river-mouth fisheries.

Malawi, LMalawi, human, fish


N/S Malawi, LMalawi, conservation, fish

883. Tweddel, D. (1995?). Malawi fish taxonomy, speciation and evolution bibliography (includes selected other groups such as aquatic molluscs). Unpublished typescript, Blantyre, Malawi. 21 pp.

Detailed bibliography (citation only, no annotations), possibly an expanded version of Tweddle & Mkoko 1986; covering fish, crustacea, midges, gastropods, nematodes, dragonflies, etc. On file at the Wildlife Society of Malawi, Limbe. Most references are related to Lakes Malawi and Chilwa.

LMalawi, MShire, Malawi, fish, inverts
Basic identification booklet to all larger fish species of the Shire river and Lake Malawi (except Cichlidae). 43 indigenous species are described, of which 29 are found in the lower Shire.
LMalawi, LShire, Malawi, fish

N/S
Malawi, LShire, human, fish

Account of the differences in fish fauna above and below Kapichira Falls on the Shire river. The falls are an ecological barrier to downstream movement of Lake Malawi fish. Lists of fish species are given.
biogeography, Malawi, LShire, MShire, fish

Large bibliography of 1101 references, covering a varied published and unpublished literature on fish, fisheries, aquatic birds and allied subjects. Entries are also cross-referenced by subject.
Malawi, human, fish, birds

Study of changes in cichlid fish populations from a lake fed by Lake Malawi and the Shire river. Chambo numbers have decreased, and appear to be separate from the Lake Malawi population. This has been replaced by kambuzi, of lesser value. The fisheries industry is in imminent danger of collapse.
Malawi, LMalawi, MShire, human, fish

Account of a survey of the fish in three different areas of the Lower Shire. Majete Game Reserve contains 21 species, Mwabvi waterholes contain 9 species, and the Lengwe waterholes had no fish.
Malawi, LShire, fish

List of 61 species from the Shire river below the waterfalls that mark the boundary of the lower and upper Shire. Abbreviated version of Tweddle & Willoughby 1979.
Malawi, LShire, fish

Gives a list of 61 species of fish from the Shire river below the waterfalls that mark the boundary of the lower and upper Shire. The species are essentially those found in the lower Zambezi.
Malawi, LShire, fish

Detailed descriptions of areas considered important for bird conservation in Botswana, including the Chobe National Park and Linyanti/Chobe area. Species of particular interest are mentioned.
Botswana, birds, conservation

Detailed account of all ringing recoveries in or of birds from southern Africa, including many wetland species. Following brief descriptions of each species habitat and conservation status, a map showing individual ringing and recovery localities is given.
SAfrica, birds

N/S. Possibly contains lists of fish species from the Kafue river.
Zambia, Kafue, fish


901. Van der Waal, B.C.W. (1985). Aspects of the biology of larger fish species of Lake Liambezi, Caprivi, South West Africa. Madoqua 14(2): 101-144. Account of the fish species found in the lake; 43 species are listed and an account of the biology of 27 species is given, including age and growth, reproduction and feeding habits. The lake ecology is based on the gradual decomposition of organic material from the surrounding swamps. Namibia, Chobe, fish

902. Van der Waal, B.C.W. (1990). Aspects of the fishery of the Eastern Caprivi, Namibia. Madoqua 17(1): 1-16. Account of the small-scale fishing industry of Lake Liambezi and the Caprivi floodplains and swamps. Gill nets mostly caught cichlids and catfish, with an annual total of 700,000 kg. Data from experimental catches with different gill sizes are given. The need for management and control of the industry to avoid over-harvesting are pointed out. Namibia, Chobe, human, fish

903. Van der Waal, B.C.W. (1991). A survey of the fisheries in Kavango, Namibia. Madoqua 17(2): 113-122. Account of small-scale fishing along the Kavango river in N Namibia. Total annual catch was estimated at 840,000 kg. Much of the fishing gear in use catches small fish and is relatively non-selective. The importance of measures to control habitat destruction is stressed. Lists of fish species caught by different methods are given. Namibia, Okavango, human, fish

904. Van der Waal, B.C.W. (1998). Some observations on fish migrations in Caprivi, Namibia. Southern African Journal of Aquatic Sciences 22: 62-80. N/S. A description of the migration of fish species to and from the Zambezi river and the Linyati floodplain. These species are classified into those that remain in the river, those that migrate between the river and floodplain, and those that remain on the floodplain. Namibia, Chobe, fish


Back to Contents


Notes on physical features and behaviour of the Slaty Egret. It occupies a marsh and floodplain niche, which explains its limited distribution.
Botswana, Chobe, birds

Popular article on the black lechwe and its conservation in the Bangweulu swamps. Gives details of the floodplain ecology and the aerial census method aimed at permitting sustainable offtake by local communities based on accurate population census.
Zambia, Bangweulu, conservation, mammals

Popular article on the black lechwe and its conservation. Reprint of Vesey-Fitzgerald (1956).
Zambia, Bangweulu, conservation, mammals

Details on the vegetation and physical characteristics of floodplains inhabited by lechwe in Zambia. Grass species and phenology is described.
Zambia, vegetation, mammals

Popular article on the black lechwe.
Zambia, Bangweulu, mammals

Study comparing nutritive values of various grasses and herbs, and grazing selection, by 3 antelope species on floodplain grassland in N Botswana.
Botswana, Chobe, mammals, plants

Consultants’ report on fish biology in Lake Cabora Bassa. Particular reference is given to kapenta.
Mozambique, Cabora, water, fish

Lists the fish species caught in Cabora Bassa 8-9 years after its creation, with some data on their relative abundance.
Mozambique, Cabora, human, fish

N/S
SAfrica, conservation, birds

A revised vegetation map (at scale 1:3 million) of Botswana compiled from previous surveys. There are 29 vegetation types, grouped into 9 physiognomic classes. The Chobe/Linyanti area, including the riparian strips, is described as swamp grassland, with dense stands of *Phragmites communis*, *Cyperus haspan* and *C. papyrus*. *Hyphaene* and *Ficus verruculosa* can be found on islands.
Botswana, vegetation

N/S
Barotse, Zambia, human, fish

N/S
Namibia, Botswana, plankton

Comprehensive review of vegetation and ecology of a significant part of the Zambezi basin. Various factors affecting plant and vegetation distribution are discussed. Brief descriptions are given of the vegetation of the Zambezi floodplain and dambo grasslands, and also of the Zambezi and Luangwa valleys, the central African plateau, and the Zambezi delta.
Zbasin, biogeography, vegetation

N/S
SAfrica, birds

SAfrica, conservation, birds


Comprehensive report listing waterbirds covered by this international agreement. Details on status and conservation are given for each. Many of the species are found within the Zambezi Basin.

SAfrica, birds, conservation


Checklist of 135 species of grasshopper from Malawi. Only a few records are from the lower Shire.

Zambia, invert


Briefly annotated list of some butterflies collected in Zambia, with many from the upper Zambezi area. 48 species are listed.

Zambia, invert


An important attempt to determine phyto geographical relations in the Zambezian region. Within the Zambezian Domain (covering the complete Zambezi Basin) a Barotse centre (characterised by *Sacciolepis* and *Hyparrhenia*), and a Kariba centre (characterised by *Tristachya* and *Acroceras*) are recognised. A Katangan centre (characterised by *Diospyros mweroensis*) is recognised at the headwaters of the Zambezi. Other characteristic species of these centres are listed. Within the Zambian woody flora, 61 species are confined the Zambezi valley or its major tributaries.

Zbasin, biogeography, vegetation, plants


Brief account of the vegetation of Zambia, including the Zambezi wetlands.

Zambia, vegetation, conservation, plants


Account of the group of geoxyllic suffrutex plants with massive woody underground stems that are characteristic of the poorly drained grasslands of the Zambezian floral region, particularly on the Kalahari sands in Barotseland. A list of species and their tree/shrub relatives is given. These species are typically found on dambo margins. The importance of these species and how they evolved is discussed. Fire and frost are not thought to be major factors.

Zbasin, biogeography, plants


Definitive account of the vegetation of Africa. Contains detailed accounts of the vegetation and plant species composition of various vegetation types. Wetland vegetation, which is often too small to be adequately mapped, is described under mangroves, herbaceous freshwater swamp and aquatic vegetation. The Barotse plains are mapped as edaphic grassland mosaic with semi-aquatic vegetation. The Busango, Kafue and Lukanga swamps are also mapped as edaphic grassland mosaic with semi-aquatic vegetation, but with the addition of herbaceous swamp and aquatic vegetation in the centre of the Lukango swamps, and a mosaic of dry deciduous forest and secondary grassland in the centre of the Kafue Flats. The Zambezi delta is mapped as Zanzibar-Inhambane East African coastal mosaic, with mangroves on the coast.

SAfrica, vegetation, biogeography, plants


Descriptions of vegetation types of Zambia, Botswana, Zimbabwe, Malawi and Mozambique with accompanying colour map at 1:2.5 million scale, based on previous surveys. There are 74 vegetation types, grouped into 9 physiognomic types. The Chobe/Linyanti swamps are classified as Loudetia grassland on Kalahari sands, with small unmapped areas of papyrus sudd, as are the Barotse floodplains. *Loudetia simplex* is the main grass, replaced by *Tristachya* on the Silowana Plains. *Fetisera nigritana* marks the alluvial banks. The upper Kafue Flats are classified as Loudetia grassland, while the lower swamps are described as edaphic or secondary plateau grassland with *Hyparrhenia*. On the Chambeshi floodplain the major grasses are *Hyparrhenia gaziens*, *Paspalum commersonii*, *Digitaria scalarum*, *Loudetia simplici* and *Thema triandra*. On other floodplains *Acroceras macrum*, *Echinochloa haploclada*, *Sacciolepis* and *Estolane zambezian* are dominant. The Lukanga swamp is described as *Hyparrhenia* grassland. The swamps of the lower Shire valley in Malawi are described as papyrus sudd, but formations on alluvium in Mozambique. Sudd consists of *Cyperus papyrus*, other *Cyperus* spp. and *Paphromiotes* reed beds. In the Shire valley *Vossia cuspidata* and *Echinochloa pyramidalis* are important. The Zambezi delta is described as formations on alluvium with inclusions of coastal thicket of *Mimusops caffra* on the dunes at the coast and fringing *Rhizophora* mangroves. The delta near Quelimane has extensive groves of coconut.

Zbasin, vegetation
Review of birds associated with Namibian wetlands. Of 620 birds found in the country, 167 (27%) are wholly dependent on wetlands. A high proportion of these are endangered owing to habitat destruction. Of particular concern are the Slaty Egret (a near-endemic) and the Wattled Crane.
Namibia, conservation, birds

Lists 617 bird species from Namibia.
Namibia, birds

Study on the Rock Pratincole from the Zambezi source to the Luangwa confluence. Distribution is related to suitable breeding (rocky) habitat. A total of 1938 were seen, principally in lower Barotseland, Kazungula to Kariba, and Kariba to Kanyemba.
Zbasin, birds

9 papers on various aspects of the Kafue Flats covering ecology, sociology, Kafue lechwe, water and development.
Zambia, Kafue, human, water, mammals

Popular article on a survey of wattled cranes in the Caprivi wetlands in July 1986. Estimated number was 11 within Namibia.
Namibia, Chobe, birds

Study on the fish and fish ecology of the Kafue basin. The importance of seasonal flooding is stressed, and this will be greatly modified by proposed dams. Fish migrate from the river to the floodplain when the waters rise, and their life cycle and breeding is closely related to this. The effects on fisheries are discussed. Lists of 53 fish species and 25 fish-eating birds are given.
Zambia, Kafue, human, birds, fish

Brief account of the population structure and status of red lechwe, indicating a declining population.
Botswana, Chobe, conservation, mammals

Brief account of sitatunga - habitat, locomotion, activity, group size and behaviour.
Botswana, Chobe, mammals

Account of habitat use by red lechwe in the Linyanti swamp, Botswana. Selection of feeding sites was probably related to grass quality.
Botswana, Chobe, mammals

N/S
Malawi, LShire, human, fish

Study of two commercially important fish species in the Elephant Marsh, Malawi. Abundance, distribution and movements were investigated, and growth rates determined. Breeding seasons, length and age at maturity and fecundity are given. Comparison of stomach contents provides data on feeding preferences.
Malawi, LShire, fish

Review of the biology of the major 5 economically-important fish species found in the lower Shire, focussing on Elephant Marsh. Most of the life cycle is subject to seasonal drying of swamps; breeding occurs during high water.
Malawi, LShire, human, fish

Account of a survey of the L Shire showed a very mobile population of fishermen, with a high proportion of temporary members. Two species of catfish *Clarias gariepinus* and *C. ngamensis* and one cichlid *Sarotherodon mossambicus* make up 90% of the catch.
Malawi, LShire, human, fish


