

BIRDS OF
ETHIOPIA &
ERITREA



John Ash & John Atkins



This map is not an authority on international boundaries.



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Birds of
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Birds of
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an atlas of distribution

John Ash and John Atkins

with contributions from
Caroline Ash, Sue Edwards, Chris Hillman, Geoffrey Last and John Miskell

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CONTENTS

	Page
Preface (<i>Professor Emil K. Urban</i>)	7
Foreword (<i>Professor Tewolde Berhan Gebre Egziabher</i>)	8
Acknowledgements	9
A general introduction to the region (<i>John Atkins</i>)	11
The historical quest for birds in Ethiopia and Eritrea (<i>Caroline Ash</i>)	13
Topographic regions and hydrography in Ethiopia and Eritrea (<i>John Atkins</i>)	22
The geology and soils of Ethiopia and Eritrea (<i>Geoffrey Last</i>)	25
The vegetation of Ethiopia and Eritrea (<i>John Atkins and Sue Edwards</i>)	27
The climate of Ethiopia and Eritrea (<i>John Atkins</i>)	35
Bird habitats in Ethiopia and Eritrea (<i>John Atkins</i>)	38
Bird and wildlife conservation in Ethiopia and Eritrea (<i>John Atkins and Chris Hillman</i>)	44
Bird migration in Ethiopia and Eritrea (<i>John Ash</i>)	48
Breeding seasons in Ethiopia and Eritrea (<i>John Ash</i>)	57
General treatment of species and the atlas (<i>John Ash</i>)	59
Maps of the region (<i>John Atkins</i>)	65
Gallery of endemic birds (<i>Hadoram Shirihai</i>)	73
Species accounts and maps (<i>John Ash</i>)	81
List A. Species recorded in Ethiopia and Eritrea	81
List B. Hybrid species recorded in Ethiopia and Eritrea	372
List C. Additional species in Ethiopia and Eritrea mapping squares recorded over the border in Sudan, Djibouti, Somalia and Kenya	373
List D. Species not considered acceptable for inclusion in List A	373
List E. Endemic birds of Ethiopia and Eritrea	377
Distribution categories in Ethiopia and Eritrea (<i>John Atkins</i>)	378
Appendix 1. Important bird areas in Ethiopia and Eritrea	378
Appendix 2. Threatened and near-threatened species	380
Appendix 3. Restricted-range species within Endemic Bird Areas of Ethiopia and Eritrea	381
Appendix 4. Biome-restricted species in Ethiopia and Eritrea	382
Bird ringing in Ethiopia and Eritrea (<i>John Ash</i>)	387
Glossary (<i>John Atkins</i>)	396
Gazetteer of localities (<i>John Atkins</i>)	398
Bibliography (<i>John Miskell</i>)	426
Index	451

LIST OF MAPS AND FIGURES

	Page
Figure 1. A simplified map of the Dahlak Islands	23
Figure 2. Monthly distribution of nest records in Ethiopia and Eritrea	57
Figure 3. Breeding seasons of five groupings of birds in Ethiopia and Eritrea	58
Figure 4. Map of tetrad coverage in Ethiopia and Eritrea	59
Figure 5. The distribution map squares	63
Figure 6. Political and administrative maps of Ethiopia and Eritrea with main towns	65
Figure 7. Political and administrative regions of Ethiopia and Eritrea prior to May 1991	66
Figure 8. Topographical map of Ethiopia and Eritrea	67
Figure 9. A simplified map of major vegetation types in Ethiopia and Eritrea	68
Figure 10. A simplified geological map of Ethiopia and Eritrea	68
Figure 11. A simplified map of major soil regions in Ethiopia and Eritrea	68
Figure 12. A simplified map of rainfall regimes and climatic regions of Ethiopia and Eritrea	68
Figure 13. Simplified rainfall maps of Ethiopia and Eritrea	69
Figure 14. Wetlands, lakes and rivers of Ethiopia and Eritrea	70
Figure 15. National Parks and other protected areas of Ethiopia and Eritrea	71
Figure 16. Important Bird Areas and Endemic Bird Areas of Ethiopia and Eritrea	72

LIST OF TABLES

Table 1. Plant species typical of major vegetation categories	31
Table 2. Ethiopian climatic zones	35
Table 3. Summary of atlas data from Ethiopia and Eritrea	59

PREFACE

The avifauna of Ethiopia and Eritrea, more than 870 species, is known for its endemics, many common and easy to see, such as Spot-breasted Plover, Rouget's Rail and Thick-billed Raven. The waterbirds of the Red Sea coast and the Rift Valley lakes are spectacular in their beauty and numbers. The birds of the highlands and montane areas are often tame and easily observed, including the isolated and endangered population of Wattled Cranes, probably representing an undescribed subspecies. The avifauna of these two nations is indeed special.

I had the good fortune from 1964 to 1975 to reside in Addis Ababa, travel widely in Ethiopia and Eritrea and study the birds there. Over the years I have managed an ongoing interest in ornithological research in this area of Africa, and it now gives me great pleasure to see the publication of the definitive work, *Birds of Ethiopia and Eritrea* by John Ash and John Atkins.

Both authors are eminently qualified to prepare this book. John Ash lived in Ethiopia from 1969 to 1977, working with the US Naval Medical Research Unit (NAMRU). Much of the information of this book comes from John's studies at NAMRU on the role of migrating and resident birds in the dissemination of arboviruses. He spent weeks and weeks at a time working in the field observing and ringing thousands of Palearctic and Afrotropical birds and checking them for arboviruses. Co-author John Atkins, working at Addis Ababa University on an educational project from 1991 to 1996, became actively involved in the Ethiopian Wildlife and Natural History Society. He inspired students to become involved in conservation activities and studying birds. He also encouraged nearly every ornithological visitor to the area to make available their records for this book on the birds of Ethiopia and Eritrea.

Land degradation in Ethiopia and Eritrea, as in many areas of Africa and the world, is expanding at an alarming rate. Many factors are contributing to this, including an increase in human population. In a part of the Rift Valley very special to me, the Abiata-Shalla National Park, where I spent many years studying pelicans, cormorants, ibises and wildfowl, the human population more than doubled in 30 years. In 1975 about 9000 people with 44,000 cattle, goats, sheep and equines lived in the park, while in 2000, 25,000 people with 77,000 domesticated stock lived there (Feyera Senbeta and Fekadu Tefera, *Walia* 22: 28–36, 2001–2). This expansion in numbers has resulted in a need to produce more food, which in turn has resulted in overgrazing, soil degradation, wetland loss, and woodland and forest destruction. These factors, aggravated by climate change, cause general habitat loss and a corresponding reduction, even possible extinction, of some of Ethiopia's and Eritrea's special birds.

Since birds are often easily seen and easily assessed, they are good bio-indicators of the health of habitats. To monitor these habitats, a detailed knowledge of the range and status of birds of Ethiopia and Eritrea is essential. Ash and Atkins' book will provide this information and in turn will be a key tool for conservation activities. Further, it will motivate ornithologists and tourists to visit and explore this fascinating part of Africa.

Emil K. Urban

FOREWORD

The number of species of birds found in Ethiopia and Eritrea is high, and includes many endemics. This is to be expected in a situation where the plateaux of both countries are much dissected, producing a wide variety of ecological conditions. Altitudes range from 100m below sea-level to nearly 5000m above sea-level. This results in wide temperature ranges in an environment where rainfall varies from as high as 3000ml down to nearly none at all in a year.

Among birds, francolins and guinea fowl suffer from some hunting pressure, but no other species are hunted. I doubt whether any Ethiopian rural boy ever escaped from being smacked if he ever stoned birds or threatened them in any other way. Crop pests, such as queleas and weaver-birds, are the only birds frightened away from farmers' crops. This positive attitude towards birds is unlikely to change in the future, provided current religious beliefs continue.

The environments of both countries are relatively free from those pesticides which have a tendency to build up in the food-chain, so this increasingly common threat to birds of prey elsewhere is hopefully less likely to arise in our region. Nevertheless many species of raptors have decreased in recent years, and some, such as the impressive Lammergeier, once quite common, are now infrequently seen. In some parts of Africa overhead high-tension wires have been recognised as causing alarmingly high mortality among some raptors. This situation may need more attention, although with a global ban on the manufacture and use of certain organochlorine pesticides being brought about by the Persistent Organic Pollutants (POPs) Convention, hopefully the situation will continue to improve in the indefinite future in the two countries here.

I am not an optimist when it comes to other pollutants that could affect birds and other animal species. Both Ethiopia and Eritrea are trying to industrialise, and the risks of increased pollution are going to grow with time. On the other hand environmental awareness is also growing, and hopefully we will avoid the majority of pollution problems that have bedevilled the countries that pioneered industrialisation.

Climate change, however, seems now to be globally inevitable. There is no doubt that substantive changes in climate will affect the distribution of birds, as well as the activities of man. Particularly vulnerable will be the very high mountain bird species since they would not have the niches that could sustain them, as there will be no higher ground to which they can escape.

This present book showing the identity and distribution of the birds in our region will, therefore, serve two obvious purposes: it will allow us to see what future changes in bird distribution could be taking place and alert us to which factors may be involved, and challenge us to identify the corrective measures which will need to be taken to save endangered species from extinction. This, in turn, will force us to give the necessary attention our environment will require so that it can continue to sustain us.

The book will also serve the obvious purpose of informing readers of what they see. Tourism is growing fast in Ethiopia, and this book will be invaluable to the ever-increasing numbers of nature-loving tourists, birdwatchers and ornithologists visiting our region. Both the authors are my old friends, and I thank them very much for this most useful reference book, which has taken many years of painstaking observation, reading, writing, and the immensely tedious task of checking and counter-checking.

Tewolde Berhan Gebre Egziabher
Addis Ababa

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A GENERAL INTRODUCTION TO THE REGION

Location

The region comprising Ethiopia and Eritrea lies in the Horn of Africa. Ethiopia, previously Abyssinia, the land of the Habasha (Amharic for 'mixture'), lies between 3° and 18°N and 33° and 48°E. It has an area of 1,133,380km² and is bounded in the south by Kenya, in the west by the Sudan, in the east by Somalia and Djibouti, and in the north by Eritrea. In 2007 it had an estimated population of c.77 million, of whom c.4.5 million live in the capital Addis Ababa. Eritrea, named after the Red Sea (*Mare Erythraeum* in Latin), lies just to the north and along the west coast of the Red Sea, covering an area of 125,000km². It is bordered to the north and west by Sudan and to the south by Ethiopia and Djibouti. Its estimated population in 2007 was 4,906,585, of whom c.500,000 lived in the capital, Asmara. The administrative regions and major towns of the two countries are shown in Figures 6a and 6b and the pre-1991 administrative boundaries in Figure 7. The international borders indicated on these and other maps have no official status.

Topography

This is a region of great geographical diversity, characterised particularly by altitudinal variation, from 110m below sea-level in the Dallol Depression to 4620m at Ras Dshen in the Simien Mountains. The plateau has many mountainous areas rising to higher than 4000m. The region contains more land above 2000m than any other African country (Yalden 1983), with two main blocks of high land, the western and northern highlands and the south-eastern highlands, separated by the Rift Valley. The main topographic regions of Ethiopia and Eritrea are indicated in Figure 8. In Ethiopia these are: the main highland plateau to the west of the Rift Valley and the Danakil Desert (also known as the Afar); the south-eastern highlands to the south and east of the Rift Valley; the western lowlands bordering Sudan and extending south to the Omo valley; the south-eastern lowlands of the Ogaden and the Somali border; the southern lowlands of Ethiopia including the lower Omo valley; the eastern lowland desert and semi-desert lands of the Danakil (Afar) south to the Awash river; and the Ethiopian Rift Valley. In Eritrea, the main topographic regions are the western lowland plain along the Sudan border, with the only year-round river, the Tacazze/Setit; the central highland plateau below the Sahel in the north, extending south to the highlands of northern Ethiopia; the north-eastern desert plain and Danakil Desert; and the coast and offshore islands. The principal river systems, all flowing from the highlands, are the Tacazze/Setit/Angareb system, the Abay (Blue Nile) system, the Awash, the Wabe Shabeelle, the Genale/Dawa/Weyb system, the Omo/Gibé system and the Baro/Gilo/Akobo system. In addition there are a number of large lakes in the Rift Valley, Lake Tana in the north-west and the northern tip of Lake Turkana in the south-west. The main wetlands, lakes and rivers are shown in Figure 14. See the Topographic Regions and Hydrography chapter for further information.

Languages and peoples

The region is marked by ethnic and linguistic diversity, with estimates of up to 100 languages, but there are generally considered to be 70–80. Major ethnic groups in Ethiopia are the Oromo (40%), Amhara and Tigrean (32%), Sidamo (9%), Shankalla (6%), Somali (6%), Afar (4%) and Gurarge (2%), with c.70 languages being spoken between them, most of them either Semitic or Cushitic in origin. The language of the Ethiopian Orthodox Church liturgy, Ge'ez, gave rise to the Semitic cluster of languages, Amharic, Tigrinya and Tigre. Amharic is the official language of Ethiopia. However, many of its regions also use the dominant local language in local government and education, with Amharic remaining the *lingua franca* of the country. Cushitic languages are spoken in the south, the most significant being Oromigna, spoken by Ethiopia's largest ethnic group, the Oromo. Further south is a range of c.25 Omotic languages. Arabic is spoken in many lowland areas and is widely used by followers of Islam. The main religions are Ethiopian Orthodox Christian (35–40%) and Islam (45–50%).

There are nine main languages in Eritrea, the most common being Tigrinya in the highlands and Tigre and Arabic in the lowlands. The Tigray people comprise 50% of the population and the Tigre 35%. The population is half-Christian and half-Muslim. The Julian 13 months' calendar is used in Ethiopia, but Eritrea has adopted the European 12-month calendar.

History

The region has a significant place in pre-human history: hominid fossil bones, including the australopithecine 'Lucy', dating back 4.4 million years, have been found at Hadar along the Awash in Ethiopia and evidence of pre-humans dating back 1 million years has been found in the Buia region of Eritrea. Human presence is known from the eighth millennium BC with evidence of Pygmoid, Nilotic, Cushitic (Afar) and Semitic (Amhara and Tigray) peoples.

The origins of the modern-day region lie in the emergence, by the third century AD, of the Axumite empire, which soon became officially Christian. In ensuing centuries the respective and often conflicting influences of chiefly Muslim interests on the coast and lowlands and Christian (Ethiopian Orthodox) interests in the highlands were not conducive to any state of unity. During a period of great instability in the sixteenth century the Galla people (the present-day Oromo) moved out of the south, up through the Rift Valley onto the higher ground of southern and central Ethiopia. During the mid-eighteenth century the region became increasingly restless as a result of feuding societies of Christians, Muslims and others, and their local rulers. Today's Eritrea was sometimes ruled by the Ethiopian highland empires and at other times separated from them. The coast remained Muslim, and between the sixteenth and eighteenth centuries was controlled by Ottoman Turks and Egyptians. Some degree of unification and modernistic development began to develop during the mid-nineteenth century.

In the nineteenth century the region became a focus of Italian colonial aspirations, and in 1890 the colony of Eritrea was established. In 1935 Italy occupied Ethiopia, but was defeated by combined Ethiopian and British forces, who returned Haile Selassie to his throne following the outbreak of World War II. Eritrea was ruled by the British until 1952, when the UN declared the country a self-governing region under the mandate of Ethiopia. Haile Selassie's reign was ended by a coup led by a military group, the Dergue, in 1974. However, its Soviet-style socialist policies were unpopular, and it collapsed after a long war in 1991, at which point a broad-based coalition was established in Ethiopia. These events also led to the end of Ethiopian rule in Eritrea and eventually to Eritrean independence in 1993, after 30 years of war.

Economies

The economies of both countries are predominantly agricultural and have been much disrupted since the 1970s by a combination of factors which have included accelerating population growth, drought and famine, war and internal security problems, land-reform programmes, nationalisation, and increasingly less favourable terms of trade. Coffee has traditionally accounted for the majority of Ethiopia's exports. Explorations for oil and gas are taking place in Somali and Gambella regions in Ethiopia and both are expected to become major export earners. There are believed to be other substantial unexploited mineral deposits in both countries, particularly copper and potash. Important products of the Eritrean economy include salt and leather products, grain, cotton, fish, livestock, various minerals, etc. There are substantial tourist potentials, still largely untapped, especially in wildlife and ecotourism, in both countries. Infrastructure, transport and water supply all require urgent attention, but none of these tasks can be seriously tackled without effective population control programmes.

Governments

The Federal Democratic Republic of Ethiopia, established in 1995, comprises nine semi-autonomous states and two chartered cities (capitals or main towns in parentheses): Tigray (Mekele), Afar (Aseita), Amhara (Bahar Dar), Oromiya (Nazret), Somali (Jijiga), Beni Shangul-Gumuz (Asosa), Southern Nations, Nationalities and Peoples (Awassa), Gambela (Gambela), Harari (Harar), Dire Dawa and Addis Ababa (chartered cities). Executive powers are vested in the Prime Minister. Each state is divided into 'woredas', the lowest level of official government. Each woreda also carries one parliamentary seat in the House of Representatives. Local government organisation through locally elected officials resides with the 'kebeles'. Responsibility for setting the policy environment for the conservation and sustainable use of natural resources falls under the Environmental Protection Authority at the federal level, but implementation is carried out by the regional bureaus and experts in each woreda. The Ministry of Agriculture and Rural Development has overall responsibility for the development of all the cultivated resources, wildlife and forests of the country.

The government of Eritrea includes a national assembly and a cabinet responsible to the national assembly. There are six regional administrative zones or 'zobas' (main cities/towns in parentheses): Semenawi Keyih Bahri or Northern Red Sea Zoba (Massawa, Nakfa), Maekel or Central Zoba (Asmara), Debubawi Keyih Bahri or Southern Red Sea (Assab), Debub or Southern Zoba (Adi Ugri, Mendefera, Adi Quala), Gash-Barka (Barentu, Agordat, Tessenai), Anseba (Keren). Responsibility for the conservation of natural resources is under the Ministry of Agriculture, the Ministry of Fisheries and the Ministry of Land. Efforts are underway to develop government structures for implementing biodiversity conservation policies.

Environment

Throughout its history, the environment of the region has been under pressure. It is known that during the time of the Axumite Empire, from the third century BC to approximately the tenth century AD, special areas were designated for hunting, and wild animals and animal products were actively traded. However, little evidence of other forms of environmental conservation practices exists, and for centuries wildlife and forests have come increasingly under pressure from population movements and population growth.

The causes of the drought, disaster and human suffering experienced in Ethiopia in recent decades lie partly in the natural environmental factors that have resulted in land degradation, partly in population growth factors that have in many areas resulted in populations exceeding the carrying capacity of the land, and partly in the neglect of smallholder farmers and their environments by the feudal government of Emperor Haile Sellassie, and the misguided Soviet-style development efforts of the Dergue, a deterioration which started in the deliberate undermining of the traditional land management systems of local communities during the periods when Ethiopia was without a clearly identified central authority in the 'Era of the Princes' as far back as the seventeenth century (Tewolde 1989, in Tilahun *et al.* 1996). As a result of these changes, in most areas of the region, farmers were only able to control access to the land they farmed during the growing season. After the harvest, land and the natural resources associated with it – water, grazing land, trees, etc. – were freely available to all members of the community, without any of the controls previously used. That these controls existed is still evident in remnants such as the controlled access to grazing land by different categories of domestic animals, with priority being given to plough oxen, found in some parts. The frequent redistribution of cultivated land under the Dergue mostly eliminated the little motivation that had existed for land improvement or for protection of indigenous vegetation. Now all regions in Ethiopia are issuing their farmers with landholding certificates giving them leasehold rights for at least two generations. In Addis Ababa the leasehold right is for 99 years. The impact on the attitudes of farmers to investing in their land can be seen in many parts of the country in the form of small private plantations of trees, mostly *Eucalyptus*, but increasingly involving other species including indigenous ones with special economic importance. The Orthodox Church and Islam have, however, always taught respect for flora and fauna, with the result that churches and mosques still offer small areas of environmental protection that are often unique in the area, while in areas such as Awi Zone and Guassa in Ethiopia local communities continue to manage communal resources, a tradition which enables more sustainable use of the environment.

The concept of conservation of officially designated areas first emerged during the period of the Italian occupation in the 1930s. It has continued since that time, but has been implemented largely only half-heartedly and was until recently still viewed in terms that did not provide for the needs of local people and were never understood or fully accepted by them. It is therefore hardly surprising that substantial damage to national park infrastructure occurred in the period of instability preceding and subsequent to the change of government in Ethiopia in 1991. Present and future conservation policies in both countries should involve local communities more in decision-making and demonstrate tangible benefits to them in order to be accepted and effective.

The region is rich in biodiversity. The highest level of biodiversity is found in the Ogaden in south-eastern Ethiopia (Gilbert 1986, Tilahun *et al.* 1996); the Afro-alpine areas of mountains in the region are home to many endemic plant and animal species; the highland plateau is rich in crop plant diversity (Edwards 1991) with races of indigenous crops that have evolved over thousands of years, looked after by farmers using traditional knowledge of how crops can survive in harsh conditions. However, the future of biodiversity throughout the region is unsure. It is at risk from continuing population growth, which brings, among other things, increasing pressure on land for cultivation, wood for energy and construction, grasslands, wetlands and fallow land for grazing. In recent years it has also brought demands for food-aid from elsewhere and the obligatory relocation of populations of indigenous people within the country. Various aspects of these problems are discussed within this book, particularly in the sections concerned with vegetation, conservation and habitats.

THE HISTORICAL QUEST FOR BIRDS IN ETHIOPIA AND ERITREA

Caroline Ash

'The abyssins have many sorts of fowls both wild and tame, some of the former we are yet unacquainted with.'

Jeronimo Lobo (Gold 1985).

The area of what now constitutes the modern countries of Ethiopia and Eritrea encloses a rugged plateau averaging 2500m wedged between the Red Sea and the River Nile. It is split to the south by the Rift Valley and dissected to the west by the tributaries of the Nile. Until the boundaries of the modern states were defined at the end of the nineteenth century, the mountainous region north of the Rift Valley inhabited by Christians tended to be known as the empire of Abyssinia. To the south lay the highlands of Shewa and beyond lay the Muslim lands of the Somalis and Oromo. Over the centuries Abyssinia's borders have been fluid, but the precipitous mountains have always provided some form to the state (Marcus 1994), and attempts to gain access to the sea provided interactions with foreigners.

This part of eastern Africa has long held an almost mystical attraction for explorers, not only because of its unique human cultures and natural resources, but also for strategic reasons. The people who undertook these expeditions were usually men and comprised an assortment of adventurers, fugitives, traders, tourists, mercenaries, diplomats, colonists, a few with more scholarly inclinations, and a smattering of professional ornithologists. Regardless of the primary motive for an expedition, amassing a natural history collection to some elusive point of completeness became a goal in itself.

Apart from the past 20 years or so, the recorded history of bird observations in Ethiopia and Eritrea is primarily European, and extends from the early seventeenth century, through the 'Age of Discovery' to the claims of empire building, culminating in the volumes of live observations made by numerous amateur and professional expeditions in the twentieth century. The intention of this summary is to outline the procession of expeditions that contributed to knowledge of birds in the region within a sketch of broader context that is intended to help explain connections. The treatment is selective and there are omissions. Some of the expeditions have also been noted in *Birds of Somalia* (Ash & Miskell 1998), and much of the available literature has been cited in other chapters.

Lyons, unicorns and elephants

There is a continuum of interactions between the Horn of Africa and Europe that pre-dates the ancient Greeks, but it seems that not until the Portuguese arrived in the sixteenth century were any detailed European natural history records made. The most notable of these were by Jeronimo Lobo (1593–1678), who arrived at the Jesuit house known as 'Fremona', south-west of Massawa on the Red Sea in 1625 (Gold 1985). In search of Cristavão da Gama's remains, Lobo travelled extensively and eventfully in the northern highlands, inspecting the source of the Nile and reporting on the people, geography and natural history. He recorded few specific descriptions of birds, being more impressed by 'lyons', unicorns and stupendously huge elephants, but he did note at least two. The first Lobo explained 'has instead of a comb, a short horn upon its head, which is thick, and round, and open at the top. The *feitan favaz* or devil's horse looks like a man dress'd in feathers, it walks with abundance of majesty, till it finds itself persued, and then takes wing and flies away'. The second bird Lobo described is more recognisable, 'But amongst all these birds, there is none more remarkable than the *moroc*, or honey-bird which is furnished by nature with a particular instinct or faculty of discovering honey'. Back in Europe, Lobo developed a reputation as an explorer, corresponding with Henry Oldenburg, the secretary of the Royal Society in Britain, about the sources of the Nile, and died a famous man in 1678.

After the Jesuits left, there followed a period of quasi-isolation from Europe, broken only by a visit in 1699 from Charles Poncet, a French apothecary to treat the Emperor Iyasu I, but who left scant natural history observations. In 1771 James Bruce of Kinnaird (1730–1794) made his way to Gonder to discover the source of the Nile (Bruce 1790). Throughout his life, Bruce was embattled by personal loss and dispute. He disembarked at Massawa, noting the Barn Swallows and Northern House Martins, scaled the escarpment and travelled through Adwa and Axum to the Emperor Tekle Haimanot's court. Bruce's interests in Abyssinian avifauna were primarily biblical and he only made written records of a dozen or so recognisable species. He discriminated sufficiently among the birds to note the seasonal migration of the Black Kites, and recorded the raptors that followed the Emperor's frequent punitive expeditions as he struggled to retain power. On his return Bruce gave some bird specimens, including an Abyssinian Roller and an Abyssinian Ground Hornbill, to Buffon, one of the founders of systematic ornithology, who added them to the *cabinet du Roi* (Farber 1997). Bruce's account of his own journeys contains unacknowledged natural history drawings and paintings made by his companion, Luigi Balugani (1737–1770), who later died at Gonder. Balugani's exquisite illustrations of plants have now been published (Hulton *et al.* 1991). Eight new species were described from these illustrations, some of which are now in the Royal Collection at Windsor, UK, and at Yale. The Yale Center for British Art holds 422 Balugani drawings of flora, fauna and natural history subjects. Of these, two sketchbooks containing 62 drawings are dedicated to birds. Other items from Bruce's collections are in the Bodleian Library, Oxford, UK.

Collecting frenzy and museum rivalries

After the Napoleonic wars, global travel escalated, fuelled by the industrialisation of northern Europe. Collections helped to map the distribution of precious antiquities and natural resources, and museums supplied the information by which territory could be claimed and commerce conducted. As the requirements grew ever more stringent for quality of preservation, discovery of new species, notes on distribution, sexual variation as well as life histories, the established museums began to see advantages in employing discerning professional collectors for expeditions (Whitaker 1996).

Immediately after the British reclaimed Egypt from Napoleon, George Annesley, Viscount Valentia, attempted to survey the Red Sea in 1805 and make commercial connections with the Abyssinian hinterland. Valentia brought Henry Salt (1780–1827) with him as secretary

and artist (Manley & Ree 2001). Salt won considerable celebrity in England, and buoyed by this he sailed again for Abyssinia in the spring of 1809, bearing letters from George III. While waiting for permission to join the court at Gonder, Salt and his assistant Richard Stuart collected several new species of bird from the Red Sea, as well as making careful records of numerous parrots, sunbirds and thrushes on their ascent to the highlands. He returned to London in early May 1810, leaving behind Nathaniel Pearce and William Coffin, but taking 70 bird specimens and a bat. He was elected Fellow of the Linnean Society in London, which earned him the patronage of the mighty Sir Joseph Banks, and subsequently developed a career as a supplier of antiquities and exotic objects to museums; but his chaotic life precipitated an early death in penury.

Although the museum in Paris had become foremost in Europe for distributing government funding and training for young naturalists, the new University Museum of Berlin also sponsored extensive expeditions, including those of Christian Gottfried Ehrenberg (1795–1876) and his companion Friedrich Wilhelm Hemprich (1796–1825). Alexander von Humboldt recommended them to the Prussian Academy of Science for exploration in northern Africa. In 1820–1826 they embarked on a hazardous journey, during which three-quarters of their number died, including Hemprich. Apart from making massive collections of diatoms and plankton, they also wrote an account of birds (Jahn 1998). The Berlin museum received 114 boxes containing 46,000 plant and 34,000 animal specimens, plus seeds, rocks, fossils and mummies (Stresemann 1954).



Christian Gottfried Ehrenberg



Wilhelm P.E.S. Rüppell

The German state museums were noted rivals in their efforts to make the most comprehensive natural history collections. In competition with his Prussian rivals W.P.E.S. Rüppell (1794–1884), sponsored by the Senckenberg Museum in his home town of Frankfurt-am-Main, started another gruelling journey (Klausewitz 2002). By 1830 Rüppell had traversed Abyssinia and mapped Lake Tana. His voluminous collections made during the 13 years he spent in the country contained over 100 new species of birds, as well as the iconic and now endangered Ethiopian Wolf. In his book, *Travels in Abyssinia*, he listed 532 bird species occurring in the region.

The south-western slopes of the highlands appear to have remained unknown to European naturalists until in 1838 Antoine Thompson d'Abbadie (1810–1897) and his brother Arnaud Michel d'Abbadie were sent by the French Academy of Sciences on a geographic and scientific expedition that was to last for 12 years (d'Abbadie 1868). The French wanted to establish themselves strategically in Africa to undermine British influence. Several overlapping expeditions involving at least 30 French nationals coordinated their activities with the brothers (Jaenen 2003), but of all of them the d'Abbadies travelled the most. As well as in Kefa and the Omo River valley in the south-west they comprehensively surveyed central and northern Abyssinia and amassed major natural history and ethnographic collections, which eventually went to the natural history museum in Paris and brought the d'Abbadies great acclaim in France.

Apart from anthropological observations, the Lefebvre, Petit and Quartin-Dillon expedition of 1839–1843 (Lefebvre 1863) made a bird collection, which was later worked on by Florent Prevost and Marc DesMurs at the Paris museum. Théophile Lefebvre (1811–1860) was a French naval officer who visited Tigray (Tegray) in the northern massif, and was asked by Dejazmatch Haile Mariam to request arms from the French government in return for Red Sea access at Anfilla (now Anfile). During 1840–1842, Pierre Victor Adolphe Ferret and Joseph Germain Galinier (1814–1888) were also travelling in northern Abyssinia and made a significant bird collection that included 15 new species (Ferret & Galinier 1847). The Frenchmen were based on the Eritrean border at Intetchaou near Adigrat, travelled in the highlands beyond Gonder to survey Lake Tana and the source of the Nile, and coordinated with the d'Abbadie brothers at Adwa.

Travelling incognito

Richard Burton (1821–1890) was the shadow behind the British scramble for Africa, and as well as his own travelogues left a paper trail of opinion in the *Proceedings of the Royal Geographical Society*. Burton travelled in East Africa with the mercurial John Hanning Speke (1827–1864), an obsessional hunter who made a huge personal wildlife collection including birds (Sclater 1864). After an initial trip to Somaliland, during which Burton was speared in the face, in 1855 he and Speke travelled in disguise to the holy city of Harar on the eastern borders of Abyssinia. After brief service in the Crimean War, Burton and Speke returned to exploration of the east African lakes, but in 1862 Speke contentiously claimed to have solved 'the question of the Nile', earning the abiding fury of Burton and nemesis at his own hand (Moorehead 1983a).

As European interest in Africa spread, an Austrian diplomat, Theodor von Heuglin (1824–1876), started his career in northern Africa before he was sent to Abyssinia in 1852 to negotiate a treaty with the Webé of Tigray. In all, he spent 12 years in the northern



Richard Burton

highlands, the Red Sea and Harar, occupied by his fascination with the antiquities, landscape and wildlife. He sent his bird specimens to Leipzig to the prodigious collector Pastor Christian Ludwig Brehm. Brehm's son Alfred had also made collecting expeditions on the western borders of Abyssinia during 1847–1852 (Brehm 1863). The Brehms' collection became highly peripatetic: it was first bought by Lord Rothschild in 1900 and added to the Tring Museum in Britain, but many of the Tring birds were sold in the 1930s to the American Museum of Natural History in New York, and then in the 1960s some of them were redistributed to Bonn (Mearns & Mearns 1998).

During 1861–1862 Heuglin returned to Abyssinia accompanied by Werner Munzinger, H. Schubert, T. Kinzelbach and Dr H. Steudner on an expedition searching for Eduard Vogel, a German explorer who had been missing since 1855. They travelled through Keren, Adwa and Axum, crossed the Tacazze River, and bypassed the Simien massif to reach Gonder. In May 1862 they left for the Nile tributaries en route to Khartoum, accumulating observations on the fauna and flora of the western slopes of the Abyssinian massif (Heuglin 1857–1877). In Khartoum, Heuglin met Samuel and Florence Baker, and the Dutch heiress



Theodor von Heuglin

and photographer Alexandrine Tinne. The Bakers were inspired to go hunting along the Abyssinian tributaries of the Nile for five years during the 1860s. Tinne joined Heuglin's party and together they travelled up the White Nile. Heuglin returned to Europe in 1864, went to the Arctic but returned to Abyssinia in 1875. Unfortunately he collapsed and died in Stuttgart before he could realise his plans to investigate the island of Socotra. During his productive life Heuglin also worked on Antinori's catalogue of 227 bird specimens collected between 1870 and 1871 from Bogos (now in Eritrea), as well as on Paul Wilhelm von Württemberg's collections made when he was Pasha (governor) of Massawa during 1842–1844 (Baldamus 1857). Heuglin remained the authority on birds of the region for nearly a century, having recorded 948 species.

By the middle of the nineteenth century many European countries were playing out their rivalries along the Nile by employing an array of adventurers with uncertain allegiances. Carlo Piaggia (1830–1882) had a long career along the Nile and in Abyssinia, joining many of the major expeditions (Almagia 1932). He first arrived in Tunisia in 1851; five years later he was at Alexandria before travelling to Khartoum and spending two arduous years following the Nile. In 1861, when Samuel Baker was travelling upstream in an attempt to locate the lost and then presumed dead Speke, Piaggia had joined forces with the Perugian exile and ornithologist Orazio Antinori (1811–1882). Together they traced the Bahr-el-Ghazal. By 1865 Antinori and Piaggia reached the land of Niam Niam (the Omo river basin).



Samuel and Florence Baker

An extraordinary campaign

Emperor Tewodros only gained European attention when he imprisoned the British consul and other Europeans in the mountain fortress of Magdala. His action prompted Queen Victoria's government to send the veteran of the Indian Mutiny, Lt-General Lord Robert Napier, to the rescue in 1868. The ensuing expedition was planned with an extravagance designed not to fail (Moorehead 1983b). The campaign cost £9 million, and recruited 36,000 people, including naturalists and collectors, as well as 20,000 mules, several elephants, 280 ships and a railway. It consulted Baker and Burton and attracted the adventurer Henry Morton Stanley on his first African trip as a journalist for the *New York Herald* (McLynn 1989). Several experienced explorers were recruited: Major James Grant, the military adventurer Captain Speedy, Werner Munzinger, who could speak Amharic and Arabic, Wilfred Thesiger's grandfather and a miscellany of observers from various European governments. Frank James was the expedition artist.

William Blanford (1832–1905) was appointed chief naturalist; he had joined the geological survey of India in 1855, and later became celebrated for his editorship of *The Fauna of British India* (1888–1891). His main responsibility was to ensure water supplies, but he was passionately interested in snails. In January 1868 Blanford had crossed the coastal plain from the expedition's headquarters at Annesley Bay, Zoulla (Zula), south of Massawa via the hot springs of Komeylee, en route to Senafe in the highlands, while his colleague William Jesse remained behind. The snails were poor, but by March Blanford had also collected 200 specimens of birds and mammals, including the endemic Thick-billed Raven *Corvus crassirostris*.

He communicated his findings from the Abyssinian expedition in a series of letters sent to the Asiatic Society, culminating in a travelogue illustrated by Johannes Gerardus Keulemans (Blanford 1870). By Good Friday, 11 April, the expedition had completed



William Blanford

its task: after a brief and violent engagement that defeated the battle-weary Abyssinian troops, Tewodros killed himself and the British withdrew rapidly with the crown jewels. The departing British assisted Ras Kassai to become Yohannes IV, King of Kings of Abyssinia. As the final cut was made to the Suez Canal in 1869, Menelik became King of Shewa, under condition that he send tributes to Yohannes.

The opening of Suez meant a need for coaling stations on the Red Sea, which together with the advent of quinine magnified the volume of European traffic to Africa. On the Arabian side of the Red Sea the British had already claimed Aden, on the opposite shore the French developed Obock as their port, and an Italian shipping company had bought the port of Assab (Aseb) north of Obock. Menelik wanted sea access for commerce to supply his growing territorial ambitions and to control European encroachment. Implementing his ambitions, as well as his need to pay tribute to Yohannes, meant taxing his subjects heavily: his raiding parties were a constant hazard not only to the Shewans but also to European visitors.

Chiarissimi naturalisti

The new Italian state was keen to flex its unified muscle on the world stage, and under the auspices of the Genoa Museum in 1870–1871 the reinstated, and now Marquis, Antinori, with his companions the botanist Odoardo Beccari and Arturo Issel, was sent to Assab (Antinori & Salvadori 1873). Antinori stayed in Keren after his companions returned to Italy, and continued to work on his collection, comparing his records with those of the *chiarissimi naturalisti* Blandford and Jesse. In September–October 1871 he was in the Barka river valley, where he recorded large numbers of storks and ostriches, obtained specimens, and made notes on faunal distribution. Back in Massawa he resumed the cataloguing of Beccari and Issel's fishes and waited for Piaggia.

By this time Massawa was in Egyptian hands and the Swiss Werner Munzinger (1832–1875) was governor (Pasha). In January 1872 the indomitable Piaggia, severely buffeted by circumstance, arrived with a beautiful collection of birds for Vienna. Seeing these the Pasha commissioned Piaggia to make another collection of animals and prospect for minerals (Piaggia 1875). In October 1872, Piaggia joined forces with I.M. Hildebrandt and headed off for Lake Tana. After a series of unfortunate events Piaggia finally found refuge in Yohannes' entourage. With his companion, Mabruk, the resourceful Piaggia took the opportunity to complete a survey of Lake Tana in a papyrus boat, make natural history collections and visit churches, even at last finding traces of gold in a mountain stream. After an absence of nine years, in 1875 the Italian travelled down the Atbara river and arrived in Khartoum. The great ornithologist Tommaso Salvadori took charge of Piaggia's collections, adding them to the vast Museum of Zoology at Turin.



Orazio Antinori



Tommaso Salvadori

In 1876, the British Prime Minister, Disraeli, bought Khedive Ismail's shares in the Suez Canal to buy off his debts, and Britain and France embarked on a shaky partnership to 'manage' the Khedive's affairs (Pakenham 1998). Piaggia was among the first to take advantage of British interests in Egypt and joined Gordon's miscellaneous retinue in their attempt to map and annex the entire length of the Nile for Egypt.

Stimulated by a visit to Rome by King Menelik, the Italian Geographical Society despatched Antinori to the Shewan capital of Ankober to establish headquarters at the base of the escarpment at Let Marafeya. This became the hub for many subsequent Italian expeditions in the 1880s, including that of the famous explorer and collector Antonio Cecchi, who later became an administrator of Italian Somaliland (Cecchi 1886, Hess 1966).

After the Mahdists annihilated Hicks Pasha in 1883, General Gordon arrived in February 1884 to organise the evacuation but became besieged in Khartoum. To ensure a clear passage for the retreat, Rear Admiral Sir William Hewett went to Abyssinia in June 1884 and made a treaty with Yohannes ceding territorial claims in return. However, the British did not want the port at Massawa to be controlled by the Abyssinians nor the French; instead they let the Italians become the gatekeepers on the Red Sea (Pakenham 1998).

Barbets, bush-shrikes and boundaries

Menelik recruited several skilled Europeans to implement his modernisation plans, but his most significant appointment was the Swiss engineer Alfred Ilg (1854–1916). Ilg was the intermediary through whom Europeans gained access to the country, and with his support Menelik became adept at using foreigners to forge routes to the coast, establish boundaries, and sustain trade in armaments and slaves. For 20 years Ilg was ubiquitous, turning up to advise or chastise many expeditionaries; and among his many accomplishments he also managed to make collections of arthropods (Forel 1894).

The Egyptian city of Harar, perched on the southern highlands and overlooking the eastern coastal plains, became the hub for the French and Italian trade to Menelik's kingdom, as well as a stopping point for numerous expeditions. The renegade poet Arthur Rimbaud lived in Harar and Aden for eleven years as a trader (Nicholl 1997). He became friends with Jules Borelli, author of *Ethiopia meridionale*, was well acquainted with Alfred Ilg, and contributed an account of Constantin Sotiro's trip to the Ogaden in June–July 1883 to the *Comptes rendus* of the French Société de Géographie. Apart from these sparse reports, Rimbaud made no other recorded contributions to natural history except for pickling an Abyssinian Ground Hornbill's head and sending it home to his mother.

To the south and east the British were penetrating Somali territory and probing the southern boundaries of Shewa. In November 1884 Frank L. James and his brother set off with Percy Aylmer and Godfray Thrupp through north Somaliland to reach the Ogaden in January 1885 (James 1885). This expedition could not have set off at a worse time: it overlapped the Berlin conference of November 1884, convened to carve up European spheres of influence across Africa, as well as the Mahdi's siege of Khartoum – Gordon was beheaded on 26 January 1885. Telegrams from the British government fluttered after the explorers, ordering their return. Despite their many difficulties a major collection was made, including several new species of bird and a bizarre social mammal, the Naked Mole Rat. From this collection, the prolific ornithologist George E. Shelley identified 61 species of birds, of which seven were new to science, including barbets, starlings and bush-shrikes (Shelley 1888). At Harar the British team met the Austrian ethnologist Dr P. Viktor Paulitschke and the sportsman Dr von Hardegger. The Austrians travelled and collected in the Ogaden, subsequently making important contributions to the Museum für Völkerkunde in Vienna (Paulitschke 1889).

By this time, Italian colonial interests had become more assertive; they gained control of southern Somaliland and occupied Massawa, supplied arms to Menelik and explored the hinterland. To support General Wolseley's expedition to retake Khartoum, the young British diplomat Gerald Portal was sent on a secret and hazardous mission to Yohannes' court disguised as a hunting trip (Portal 1887) in a vain attempt to persuade the Emperor to cede back the parts of Bogos that Hewett had handed over. Yohannes was killed in 1889 during a Mahdist incursion. Menelik did not hesitate to claim the thrones of Abyssinia and Shewa, and urged his Italian allies to penetrate inland from Massawa and take the highland city of Asmara. On 2 May 1889, Menelik as Emperor of Ethiopia signed the treacherously translated treaty of Wichalé with Count Pietro Antonelli and sealed the fate of Eritrea as an Italian colony and Ethiopia as an Italian protectorate.

Last of the unexplored territory

In the final throes of the scramble for Africa, Lake Rudolf (now Turkana) acquired particular significance, as at the end of the nineteenth century this was the last 'unknown' fragment of the continent (Imperato 1998).

Prince Eugenio Ruspoli's and Captain Vittorio Bottego's ill-fated attempt to reach Lake Rudolph by travelling up the Juba river ended in Ruspoli's death 150 miles from his goal on 4 December 1893 during an elephant charge. He left his name in *Tauraco ruspolii*. The type specimen of this endemic species was found in the Prince's collection when it was returned to Italy, but the bird's locality remained a mystery until C.W. Benson observed the turacos in the 1940s. Hard on Ruspoli's heels, and complaining about the Prince's rash behaviour, came an American, Arthur Donaldson Smith, who was determined to fix the geographical position of Lake Rudolph (Smith 1897). Smith hired a professional taxidermist, Edward Dodson, to accompany him and his friend Fred Gillett.

Menelik's raiding parties constantly harried the expedition across Borana, but excited Smith's admiration: 'a braver, hardier, more energetic, though savage lot of men could not be found'. Smith was tough too: neither charging rhinos, Abyssinians, lightning, fever nor flooding rivers deterred him from methodically collecting and surveying until he reached Lake Abaya. By the end of May his party had reached Lake Stefanie (now Chew Bahir) and sighted Lake Rudolf on 14 July 1895. After a deviation north to Murle on the River Omo they crossed Marsabit and gained the coast at Lamu. Smith and his companions had collected 700 birds, among which Richard Bowdler Sharpe at the British Museum found 24 new species. Smith also accumulated specimens of 300 reptiles, 300 plants, more than 1000 butterflies, 3000 other insects, 200 mammals and some rocks. The British Museum received most of Smith's type specimens; the remainder went to the Academy of Natural Sciences in Philadelphia, USA. Smith was an accomplished cartographer, very aware of the value of his maps, and used them to negotiate influence with the Royal Geographic Society in London.

Claiming the heart of the continent

While Smith trekked to Lake Rudolf, tensions between Britain and France over Egypt were mounting. In 1895 Sir Edward Grey, the British Under Secretary of State for Foreign Affairs (and a dedicated ornithologist), declared the entire length of the Nile to be British territory, thereby provoking an expeditionary race that almost led to war between Britain and France. The focus was a small antislavery post, Fashoda (now Kodok), 100 km north of the confluence with the Sobat river. Menelik succeeded in trading access to the Nile among the European rivals to win guaranteed access to the coast (Lewis 1987).

1896 was a pivotal year from many perspectives. Shelley started writing *The Birds of Africa*, a project that was to take him 16 years and fill five volumes (reviewed in Oberholser 1913). Shelley not only produced the massive work covering all African species, including all those in the Ethiopian region (Shelley 1896–1912), but he also wrote a monograph on the sunbirds (Shelley 1876–1880), and another on the birds of the Horn of Africa (Shelley 1888). This year the Italians ignominiously lost to the Ethiopians at the Battle of Adwa; an event that was to foreshadow future calamities but had the immediate effect of boosting Ethiopian confidence in dealing with Europeans. This year also saw Kitchener retake the Sudan and galvanise the British to secure access to the Nile.

While the British tried diplomatic manoeuvres the French decided in 1897 simply to march to the Nile. Aiming to meet at Fashoda, Captain Jean-Baptiste de Marchand (1863–1934) approached from the Congo, and Marquis Christian de Bonchamps (1860–1919), with his companion André Bonvalot, from Djibouti (Bonchamps 1898). To help install the newly appointed British representative John Harrington, the British gathered a group of impressively tall veterans from Napier's expedition including Swayne, the scholarly Herbert Weld Blundell, Reginald Wingate and a squad of Sikh soldiers, all led by the poet and diplomat Sir James Rennell Rodd (1858–1941) (Gleichen 1898).

Menelik ensured the French travelled only at his convenience. They endured appalling hardships, but apparently still made natural history collections, although it is not clear what happened to them. The result of Menelik's manipulations was that Bonchamps and Marchand missed meeting at the Nile by two weeks. The French were outnumbered by Kitchener's forces and Marchand retreated ignominiously to Djibouti. The British had gained the advantage because they granted Menelik access to the port at Zeila (Pakenham 1998). Although the outward journey had not permitted Swayne the time, on the return he could do what he enjoyed most and said he made 'astronomical observations...; and every spare moment, while coming on slowly with the rearguard, was devoted to taking photographs, drawing, or collecting butterflies' (Swayne 1903).

Despite the circumstances Donaldson Smith tried hard to obtain funds from British institutions for another trip to Lake Rudolf. Denied money and access, he had to watch from afar: lending a medical hand in the Afghan wars and writing dispatches for the *New York Sun*. In 1898 Blundell was allowed to return to Ethiopia via Zeila, accompanied by Lord Lovat, the polar explorer and medical doctor Reginald Koettlitz (who was to travel with Captain Scott on the *Discovery* in 1902), and the naturalist Mr Harwood. During a transect of 300 miles of Menelik's empire, Blundell made maps and Lord Lovat shot 523 birds of 303 species, as well as confirming several of Rüppell's type specimens (Blundell and Lovat 1899, Blundell 1900).

Early in 1899 Baron Carlo Freiherr von Erlanger (1872–1904) asked Oscar Rudolf Neumann (1867–1946), a companion on earlier travels in Kurdistan and Armenia, to join him on a trip to Somaliland and Ethiopia (Neumann 1902d). They ended up separating: Erlanger headed south-east to Sheik Hussein, while Neumann went south-west to Lake Stefanie and the Omo River. The drought conditions were so severe that Neumann recorded children being sold in markets alongside livestock and grain. On reaching the slow-moving, crocodile-infested Pibor River, the combined effects of the drought, desertion of his porters, rinderpest and failing food supplies persuaded Neumann to jettison everything inessential into the river. He reported 'the only part of my belongings which I contrived to bring safely home being my collections, photographs, diary, and route books', including 2000 fossils, 700 rock specimens, a new species of hartebeest and several hundred plants – an astonishing burden for a desperate man. He was literally saved by the bell: at the moment Neumann was burying his ivory in a hole in the riverbank Slatin Pasha turned up in a steam boat and rescued the expedition.

Erlanger's birds obtained on his trip formed one of the most important collections of the Senckenberg Museum at Frankfurt (Hilgert 1908, Naumburg 1931). Neumann's went to the Museum at Tring, where he worked briefly under Rothschild's patronage. Financial distress made Neumann return to Berlin, where he worked as a stockbroker until the Nazi regime forced him to flee to Cuba. From there he migrated to the Field Museum in Chicago (Stresemann 1947).

Donaldson Smith finally succeeded in gaining support from the Prince of Baroda, who wanted specimens for his personal museum (Sharpe 1901). Eventually, the Prince donated 103 bird specimens to the British Museum. Smith reached Lake Rudolf on 10 December 1899, followed by J.J. Harrison's and Percy Powell-Cotton's (1866–1940) hunting expedition (Powell-Cotton 1902). One purpose was to hoist a flag at Murle between Menelik's empire and British East Africa, but they also collected 300 specimens of 150 bird species (Ogilvie-Grant 1900), a new species of bat and an albino topi. Powell-Cotton kept a museum for his trophies, where he pioneered the use of diorama.



Oscar Neumann (left) with Ernst Hartert (centre) and Erwin Stresemann (right)

The museum is still open at the family home in England, Quex House, Birchington, Kent. In 1901 the Royal Geographical Society awarded the persistent Donaldson Smith the Patron's medal for 'For memorable journey across the unknown parts of Lake Rudolf and the Omo' [*sic*].

By the turn of the nineteenth century American industrialists with astonishing fortunes could afford to indulge their frontier spirit independently of European territorial concerns. In 1901 Oscar Terry Crosby, who had founded the Potomac Power Company, crossed Ethiopia. There seems to be a collection in the Smithsonian Institution in Washington D.C, USA, and his papers are lodged in the National Library of Congress (Krusten & Kerwin 2005). After the First World War, Crosby joined the US Treasury Department with particular interest in war reparations, wrote prolifically and resumed travels across Africa in the 1920s.



Baron Carlo Freiherr von Erlanger

Surveying the Abbai

By 1902 Menelik renounced his claims on the Upper Nile as the British established the Uganda protectorate and Kenya colony. In September 1905, Sir Edward Grey, the British Foreign Secretary, was still anxious about control of the Nile and wanted it surveyed. William Northrup MacMillan and his determined wife Lucie failed spectacularly in their attempts to navigate the Blue Nile (Abbai). MacMillan, a Scottish-born American industrialist and sportsman, had three steel boats built in sections that were reconstructed at the confluence with the Muger River. At the first cataract, one boat capsized, the other sank, and the expedition was aborted (Jessen 1906). Their political influence apparently undiminished, the MacMillans subsequently settled in British East Africa, hosting Roosevelt and Churchill on hunting

trips. MacMillan persuaded his friend Burchart Jessen to try again in 1905. Jessen travelled some 200 miles along the banks of the Abbai from the Sudan frontier accompanied by Photious C. Zaphiro (1879–1933), who worked as an interpreter attached to the British Legation in Addis Ababa, and was also a collector on several expeditions (e.g. Ogilvie-Grant 1907b, 1913). Zaphiro is buried in the graveyard at the British Embassy in Addis Ababa.

The Rothschild family became very interested in the Ethiopian Beta Israel communities at this time, because of their involvement in establishing a Jewish homeland. In 1904–1905, Maurice de Rothschild travelled with the collector C.F. Camburn, other scientists and two taxidermists from Paris to Djibouti and then to the highlands. The results of this expedition are dispersed in the literature: some of the non-avian specimens are in the museum in Paris and the birds went to Walter Rothschild's museum at Tring (LeCroy pers. comm.). Oscar Neumann worked on part of the collection, but it was never reported on in full. The insects and reptiles are documented in specialist journals. The Tring birds were later sold to the American Museum of Natural History (AMNH) in New York. Records from the AMNH also disclose its possession of at least 1400 specimens dated 1914–1915 and 1919 originating from the Rothschild collection at Tring, with Ethiopian localities labelled in Hungarian by Odon Kovacs. There is no other documentation for these birds and the circumstances of their acquisition are mysterious.

Wealthy Americans with a zeal for collecting continued to visit Ethiopia to seek trade and adventure. Childs Frick (1883–1965), the son of the Pittsburgh steel industrialist and art collector Henry Clay Frick, travelled to Ethiopia in 1911–1912 for Harvard's Museum of Comparative Zoology. Edgar Mearns, Teddy Roosevelt's companion on an African hunting trip in 1909, was the ornithologist. The expedition met in Djibouti, took the French railway to Dire Dawa and followed the Rift Valley south-west, stopping to collect intensively south of Lake Abaya before heading for the railway at Nairobi. Mearns was diabetic and suffered intensely on this trip; unfortunately he died in 1916 before he was able to complete his report on the astonishing collection constituting more than 5000 birds, nests and eggs now lodged in the Smithsonian Institution in Washington DC. Nevertheless, before his death he managed to name 88 species and subspecies (Friedmann 1930b).

In 1913 Menelik died of a stroke, his consort Zawditu became Empress in 1916, and her cousin Ras Tafari asserted his authority as Regent (Marcus 1994). Subsequently, Egypt freed itself from the British in 1922, although they retained Sudan. The British pressed for a complete survey of the Abbai because of its significance to the irrigation schemes in the Sudan, and partly in response to France re-opening the arms trade to Ethiopia through Djibouti. A mission was sent to Lake Tana to investigate the prospects for a dam to regulate flow (Grabham & Black 1925), a project that was eventually turned over to American interests. R.E. Cheesman (1878–1962) was designated British Consul based at Lake Tana during 1925–1934, and part of his job was to survey 500 miles of the upper reaches of the Abbai. Funded by the Natural History Museum in London and Lord Rothschild, Cheesman collected 2000 bird skins and travelled over 5000 miles (Cheesman 1928). He was given the Gill Memorial Award by the Royal Geographical Society.



Edgar Mearns

As Ethiopia turned away from its uncomfortable relations with Europe, the Regent, Ras Tafari, made contact with India and the USA, and increasing numbers of American visitors made their way to the country. Between 1926 and 1927 the celebrated American wildlife artist Louis Agassiz Fuertes and his companion Dr Wilfred Osgood, sponsored by the Field Museum and the *Chicago Daily News*, crossed Ethiopia from the Bale Mountains to Lake Tana and the Simien Mountains. Fuertes' series of colour plates changed the style and standard of wildlife painting; sadly this enthusiastic and talented man died only months after returning from Ethiopia (Fuertes & Osgood 1936). The Field Museum in Chicago holds many of Fuertes' beautiful illustrations of birds.

Baron Raimondo Franchetti, the headstrong scion of an aristocratic family who became known as *il Lawrence Italiano*, brought his interest in zoology to prospect for specimens in Ethiopia. Together with his friend Amedeo, Duke of Aosta, in 1921 they travelled across southern Ethiopia, and during 1928–1929 Franchetti crossed the Danakil from Gojjam to Eritrea to fill in another blank space on the Italian map of Africa. For his services he won an honorary membership of the Società Geografica Italiana. The majority of his collections were kept first at his property near Treviso and then donated to Museo Civico di Reggio Emilia (Ghigi 1931, Mondadori 1935).

Brief conquest

1930 saw the death of Empress Zawditu, the exile of Iyasu, and the ascendancy of the regent Ras Tafari to the Ethiopian throne as Haile Selassie. A spectacular ceremony was attended by a glittering selection of foreign envoys, journalists and guests, including the Thesigers and Evelyn Waugh. Wilfred P. Thesiger (1910–2003) was born at the British Embassy in Addis Ababa, and cut his expeditionary teeth exploring the Danakil in 1933–1934 (Thesiger 1998). He became renowned for his travelogues on the Arabian Empty Quarter, the marshes of Iraq and East Africa. Although his father taught Thesiger about birds, he was not very interested in them but did make one notable contribution to *Ibis* (Thesiger & Meynell 1935a). The Pitt Rivers Museum in Oxford holds a large collection of his photographs. While Thesiger was crossing the Danakil, Dean Hobbs Blanchard, a wealthy Californian, also travelled to the Awash River before veering south-west, collecting en route to augment his personal museum at Santa Barbara. Blanchard subsequently wrote extensively about his bird collection, annotating it with comments about parasites and migration (Blanchard 1969).

During the 1930s Haile Selassie consolidated his empire and promoted a tenuous modern infrastructure. In 1935, thwarted Italian colonial aspirations reached a head as Mussolini came to power. Ethiopia was invaded and the monarchy exiled to Britain (Marcus 1994). The Italians maintained an uncertain grip, particularly in remote rural areas, and avenged insurgency with violent repression. Ornithology, however, thrived. Augusto Toschi made several important bird collections from Lake Tana, Kefa, the Omo river area, Ogaden and western

Somaliland (Toschi 1959). Marchese Saverio Patrizi Naro Montoro (1902–1957) had already explored the Congo basin, and was a signatory of the 1933 London convention for the preservation of fauna and flora, which was instrumental in the establishment of national parks and reserves throughout Africa. He made large collections from the Rift Valley, the Didesa valley and the Juba river basin (Patrizi 1940a,b), which were distributed to the museums at Rome and Genoa (Ash & Miskell 1998). During 1940–1941 Toschi tried to consolidate all the specimens collected by Italian expeditions in the Laboratorio di Zoologia in Addis Ababa (Toschi 1959). Meanwhile, Edgardo Moltoni and Giuseppe Gneccchi Ruscone, based in Milan, compiled and succeeded in publishing four volumes on the birds of Italian Africa illustrated with over 150 illustrations by G. Galleli (Moltoni & Ruscone 1940–1944). It remained incomplete, as the Museum at Milan was burnt down during the European war.



Edgardo Moltoni

The last emperor

In January 1941 Haile Selassie with his patriots and a British force took advantage of the gaps in Italian control to retake Ethiopia. The demoralised Italians retreated to a few forts. Part of the natural history collections made by the Italians in the Bale Mountains seems to have been destroyed by Ethiopian militia, another part was plundered by British troops and some specimens were sent to the Coryndon Museum in Nairobi (Toschi 1959).

In May 1941 Haile Selassie was restored as Emperor but the country remained under Sir Philip Mitchell's British military administration for a further eight months while the remaining Italians in the Didesa valley were removed. As prisoners of war in British East Africa, Giulio Tartaglia worked on Toschi's collection at the Coryndon Museum while Toschi worked for Louis Leakey at Olduvai Gorge. Many of the Italians' specimens were sent to the British Museum at Tring, possibly after selection by Cheesman and R. Whalley. In 1955, Tartaglia seems to have restored some examples from the collection to Toschi in Bologna, and others were returned to Addis Ababa (Toschi 1959). After the war, a collaboration developed between Patrizi and Horatio M. Woodman, an American keen on hunting, who made many observations on arrival and departure dates of migrant waterfowl and of (mostly Great) Snipe (e.g. Woodman 1944c). Woodman hunted around Addis Ababa and shared a taxidermist with Patrizi.

Between June 1941 and March 1942 Mitchell sent Constantine W. Benson (1909–1982) to rout the Italians from their fort at Mega. In his obituary Stuart Keith (1985) wrote that, 'It is said that his collecting gun was fired so often that the Italians refrained from attacking what they considered must be a large force.' From Mega, Benson made extensive patrols along the border with British East Africa, during which he made a large collection of birds, later written up in *Ibis*. After a return trip in 1946 Benson retired from the colonial service and in 1965 started work on the bird collections at the Cambridge University Museum of Zoology. In a similar role K.D. (Ken) Smith worked for the British administration of the UN Protectorate in Eritrea between 1944 and 1950, and published 21 papers from his observations and collections, including the excellent *Checklist of the Birds of Eritrea* (Smith 1957).

Haile Selassie consolidated his claims to the region as the British withdrew, keen to avoid annexation into British East Africa. After the war, a few years of relative peace and prosperity brought increasing numbers of foreign visitors to Ethiopia. The first class of students graduated from the University in Addis Ababa in 1954, and the science faculty grew in strength. By 1966 the Ethiopian Natural History and Wildlife Society was established.



Emil Urban

Despite US support, the country gradually became one of the poorest in Africa and the regime vulnerable, until finally in 1974 famine fuelled a creeping Marxist–Leninist revolution led by Mengistu Haile-Mariam that culminated in Haile Selassie's death in August 1974 (Marcus 1994). In 1991 an insurrection in Eritrea marched on Addis Ababa and established a western-oriented government led by Meles Zenawi. In 1993 Eritrea became independent; however, the borders of Ethiopia continue to be bloodily disputed by the Eritreans, Tigrayans and Somalis, and famine threatens repeatedly.

In spite of periodic turmoil, birds were watched and studied. Emil Urban, a professor at the university in Addis Ababa, co-authored a checklist of the birds with Leslie Brown (Urban & Brown 1971). Chris Hillman worked extensively in the Bale Mountains National Park (Hillman 1990). Stephanie Tyler became very familiar with the birds of Tigray and Eritrea when she and her family were held captive by guerillas in 1976. Melvin Bolton with C. Zewdie worked on a list of birds in the Nechisar National Park (Safford 1993). The taxidermist Svante Pohlstrand was an important pivot for collectors, and later his son, Håkan Pohlstrand, organised bird tours in the country with Kidane Biyadgo. John Ash had a particular interest in migrants, and travelled widely during his eight years in Ethiopia. His extensive observations on the distribution of birds in the region led directly to the development of the bird-mapping project, and to this atlas (and also to the publication of *Birds of Somalia* in 1998). John Atkins at Addis Ababa University coordinated record-keeping from many visiting ornithologists. Mike Jaeger worked on quelea control. In the late 1980s and early 1990s Tesfaye Hundessa and Yilma Dellelegn Abebe of the Ethiopian Wildlife Conservation Organisation undertook valuable surveys of the status of some Ethiopian bird species

and surveyed several lesser known areas. In the early 1990s the Ethiopian Wildlife and Natural History Society formed a partnership with BirdLife International to inventory Important Bird Areas. Sue Edwards, Solomon Tilahun and Tewolde Berhan Egzhiaber subsequently edited an account of these (Tilahun *et al.* 1996). Since the mid-1990s Mengistu Wondafrash has taken the reins for Ethiopian bird conservation, coordinating with BirdLife International, the Royal Society for the Protection of Birds and other organisations to find ways of protecting key sites for endangered species in the country. Mengistu Wondafrash, Yilma Dellelegn, Mihret Ewnetu, Anteneh Shimelis and others have also been running annual waterbird surveys for the International Wetlands Research Bureau. In Eritrea, Dawit Semere, Giuseppe De Marchi, Giorgio Chiozzi and colleagues carried out important research on breeding seabird populations on Red Sea islands between 2001 and 2007.

The geographical region encompassed by Ethiopia and Eritrea has constantly been subject to human upheaval, drought and famine. Its fauna and flora are unique and extremely vulnerable, and have attracted fascination for centuries. Much has been lost, but much has been learnt over the centuries of acquisition. As the world enters an era of accelerating environmental change it is important to bring the accumulation of stored knowledge of birds to sentinel the areas of high biodiversity that sustain the delicate landscapes of these countries.

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