A READER’S GUIDE AND RETROSPECTIVE TO THE 1982 DARWIN CENTENNIAL

RICHARD J. WASSERSUG
Department of Anatomy, Dalhousie University,
Halifax, Nova Scotia, Canada B3H 4H7

MICHAEL R. ROSE
Department of Biology, Dalhousie University,
Halifax, Nova Scotia, Canada B3H 4J1

ABSTRACT

An effort has been made to survey all major publications produced around the world in commemoration of the centennial of Charles Darwin’s death. Over seventy publications of collected essays dedicated to the occasion have been identified, as well as over a hundred symposia, lecture series, special museum exhibits, and miscellaneous other events. These publications and events are presented in an annotated list, by country. Most of the English-language publications that are primarily biological in nature are briefly reviewed so as to indicate their target audience, significance, and quality.

Italy, followed by Spain, then England, France, and the United States, did most to commemorate the centennial. Relatively few centennial publications or activities originated in communist bloc countries, or in Latin America, Africa, Asia, or the British Commonwealth excluding England. In the United States, commemorative activities were almost exclusively university-based, a situation indicating that Darwinism is perceived as an essentially academic discipline in America. In continental Europe, sponsorship by a political organization or government was common, with a particular pattern that indicates a prevalent association of Darwinism with leftist political ideologies. This association may have helped to promote interest in the centennial in such countries as Italy and Spain, which currently tolerate a broad spectrum of political views. The topics dealt with in commemorative papers from around the world indicate that the association of Darwinism with socialist political ideology is far more pervasive than the English-language centennial literature would suggest.

Within any country, there appears to be no correlation at all between those academic institutions that are most active in contemporary evolutionary biology and those that did the most to commemorate the Darwin centennial. This lack of association testifies to both the autonomy and maturity of the “Darwin Industry” outside of biology.

One of the prime aims of the [London Darwin] meeting was—unlike many of the other centennial events—to avoid cluttering up the literature with repetitious, derivative and expensive publications. There is, therefore, I am glad to say, no symposium volume in preparation.

J. S. Jones (pers. commun.),
Organizer of the University of London’s Darwin Symposium.

Each of us has a variety of visions of Hell. Among mine are that I will spend an eternity of days attending and reading the proceedings of symposia on evolution...

NINETEEN EIGHTY-TWO was the centennial year of Charles Darwin's death. Biologists and historians around the world held symposia and wrote papers to commemorate the occasion. In this article we propose to review various centennial publications and events. In one sense, we will address the question: If there were indeed a Hell on earth, how many 1982 Darwin gatherings would Professor Lewontin have gone to, and how many collections of papers published for the occasion would he have read?

We go beyond a simple enumeration of centennial productions to offer a critical guide to the English-language centennial literature, particularly that of a biological nature. In taking a census of these commemorations, we have tried to look for patterns in the way the centennial was celebrated within and among different countries. We have attempted to identify global patterns in the growth of interest in Darwin and his work among scientists, humanists, and the public at large.

To facilitate international comparison, we will present our data as an annotated list, ordered geographically in succession as follows: Anglo-America, Latin America, Africa, Western Europe, Eastern Europe, Asia, and Australo-Pacifica. We will conclude with some comments on the state of Darwinian studies at the time of the centennial and the current perception of Darwinism around the world.

Before presenting our centennial record, it is important to indicate the boundaries of this study. First, we shall survey, with as few exceptions as possible, only that literature and those events specifically published or organized to commemorate the centennial of Charles Darwin's death. Second, commemoratives that were primarily decorative and without literary content, such as Darwin centennial postage stamps (which were issued by Great Britain, India, Falkland Islands, Mauritius, Ecuador, St. Helena, Antigua, Cocos (Keeling) Islands, and Sierra Leone), are not included in our annotated list. Last, we will largely limit our review to collections of essays with multiple authors or to conferences with multiple lecturers. Such collective efforts require collective planning; thus their dedication to the memory of Darwin reflects a communal interest in him and in his work. By contrast, it is relatively easy for a single author or lecturer to dedicate a work to whomever he pleases without a larger consensus. We therefore consider single-authored commemoratives to be unreliable measures of the current state of interest in Darwin. Besides, the number of single-authored works written and the number of lectures given in 1982 in honor of Darwin are simply too large to be reviewed in any manageable fashion.

By these rules, conferences obviously dealing with evolution and held at the time of the centennial, but not specifically commemorating it, are not included. A Darwin commemorative festival held at Salem State College in Massachusetts is excluded because it is an annual event and would have taken place in 1982, even if that were not a centennial year. We exclude both the Dahlem Workshop (published as Evolution and Development, J. T. Bonner, ed., Springer Verlag, Berlin, 1982) and the Bad-Homburg Conference (Dimensions of Darwinism, M. Grene, ed., Cambridge University Press, 1983), since neither one was proclaimed a commemorative. An impressive collection of commemorative articles on evolutionary biology appeared in the Summer 1982 issue of Perspectives in Biology and Medicine. Since those articles commemorate the 25th anniversary of that journal, rather than Darwin, we will not discuss that collection here other than to note that it exists. We mention all this noncentenary activity to document that there was a lot of scholarship on Darwin and on evolutionary biology produced around 1982 that is in addition to and independent of the commemoratives that concern us here.

We have made little effort to document symposia and lecture series for which all of the participants came from the host institution and that did not lead to a publication. Such intramural gatherings usually receive little external advertising, and are thus very difficult to identify without a massive polling of possible sponsoring institutions. Obviously, the more provincial a commemorative was, the less likely we were to discover it. As it is, less than 10 per cent of the national and international centennial gatherings that we
have found were listed in the standard source for such information, *World Meetings Publications* (Macmillan, New York). Our list is derived from over 100 letters and telephone calls to evolutionary biologists and Darwin scholars around the world. Nevertheless, we fully expect to be told of publications, symposia, and exhibits that we missed.

The following, then, is our survey of Darwin centennial publications and events. We have tried to confirm all information on these commemoratives by consultation with actual contributors or participants.

**UNITED STATES**

(1) *Evolution, 36*(6): 1109–1143, 1982. *Evolution’s* celebration of the Darwin centennial was surprisingly modest, just three articles. All were presented at a centennial symposium convened by William B. Provine for the 1982 meeting in Washington, D.C., of the American Association for the Advancement of Science. However, not all of the papers presented at the original symposium were included in this collection. Three articles are too few to provide much breadth of discussion.

Ledyard Stebbins and Ernst Mayr each contributed an article on speciation and macroevolution. Their views are strongly individualistic, rather than disciplinarily consensual. Neither article is the best nor most comprehensive of the recent review articles written by these authors. In the third article, Walter Fitch discusses “the challenges to Darwinism since the last centennial and the impact of molecular studies.” He presents new combinations of ideas not discussed elsewhere. For example, he predicts that organisms will be found to vary their gene-specific mutation rates at loci that require new alleles because of new environmental conditions—a hybrid Lamarckian-Darwinian mechanism of evolution. Fitch’s article is worth reading. On the whole, however, and by comparison with other journals, *Evolution’s* centennial effort is disappointing.

(2) *BioScience, 32*(6): 495–533, 1982. The six *BioScience* articles are all ostensibly for the general biologist, but vary in form and quality. Most address, retrospectively, broad fields of science in which Darwin worked—e.g., James W. Valentine on paleontology and Brian R. Rosen on coral reef geology. Three articles deserve special comment. In his introduction, Jeffrey Levinton attacks creationism and the “punctuativism” of Eldredge et al., although Levinton appears to view scientific development as a struggle and to welcome such challenges. William Provine’s article, “Influence of Darwin’s Ideas on the Study of Evolution,” is clear, balanced, professional and, thankfully, concise. He concludes with a stringent assertion of Darwinism’s destruction of the traditional Western notions of God, free will, and morality, an assertion that should raise an eyebrow or two. The last article in the collection, “A Molecular Drive through Evolution,” is by Gabriel Dover, who claims to have discovered a third force in evolution, on a level with selection and drift, a force which he calls “molecular drive.”

(3) *Darwin’s Legacy: Nobel Conference XVIII,* Charles L. Hamrum (ed.), 125 pp., Harper & Row, San Francisco, 1983. This small book comes from a conference held in October 1982, at Gustavus Adolphus College in St. Peter, Minnesota. It includes six chapters, plus an edited transcription of a discussion among audience and speakers. The authors are J. Pelikan, Irving Stone, Richard Leakey, E. O. Wilson, Peter Medawar, and Stephen J. Gould. Of the two books for the generalist that we have reviewed in detail, *Darwin’s Legacy* is the less satisfactory. An unfortunate inclusion is an essay by Jaroslav Pelikan, “Darwin’s Legacy: Emanation, Evolution, and Development,” which is almost entirely concerned with the theology of Cardinal Newman. The only tie to Darwin to be found in this article, and a weak one at that, is the discussion of Newman’s use of the idea of “emanation-as-evolution” in his analysis of Christian doctrinal development. Irving Stone contributes a view of Darwin’s overall cultural impact, “The Human Mind after Darwin,” and goes overboard in his praise of the man, casting Darwin as single-handedly introducing the scientific worldview to Western thought. Richard Leakey has a studiedly informal piece on hominid evolution, “African Origins: A Review of the Record.” It is written in a charming style, but that same style is likely to irritate professional
evolutionists. E. O. Wilson’s essay, “Sociobiology: From Darwin to the Present,” recruits Darwin as an early sociobiologist and promotes some of Wilson’s own controversial ideas. Stephen Gould’s chapter is reprinted from the February 1982 issue of Discover, although some of his extemporaneous comments taped at the conference are included in this volume as an appendix.

(4) Science, the Bible and Darwin in Free Inquiry, 2(3): 1–70, 1982. This is a series of seventeen articles from a symposium held in April at the State University of New York at Buffalo. Free Inquiry is the forum of the Council for Democratic and Secular Humanism, a non-profit organization actively opposing biblical fundamentalism. The symposium—collected, edited and introduced by Paul Kurtz—is divided into four parts: “The Bible Re-examined: A Scholarly Critique,” “Darwin, Evolution and Creationism,” “Ethics and Religion,” and “Science and Religion.” Most of the essays are editorial in mode, with few references to the literature. Biologists will not gain much from these essays, but those who participate in the evolutionist-creationist debate will want to be familiar with them.

(5) and (6) Darwinism in Russia, Mark Adams (ed.), publisher and date of publication to be determined, and The History of Eugenics: Comparative Perspective, Mark Adams (ed.), publisher and date of publication to be determined. These are the titles of two volumes from two conferences held in March and May 1983, respectively, in the Department of History and Sociology of Science, University of Pennsylvania. Mark Adams organized an additional lecture series, entitled “Perspectives on Darwinism,” which ran weekly at the University of Pennsylvania from mid-January to the end of April, 1983. The conferences and lectures had a predominantly historical and sociological, rather than a biological, focus. To our knowledge, the University of Pennsylvania, which also added to its curriculum several courses on “Darwinian influences,” did more to honor the centennial than any other North American institution.

(7) Journal of the History of Biology, Vol. 15, 1982. Published in Holland but, because it is edited at Harvard University, this journal is considered to be a U.S.A. publication. In 1982, the journal expanded from two to three issues per year and in commemoration of the centennial had a “Special Section on Darwin and Darwinism” in each issue. This Special Section amounted to 12 out of the 16 essays that the journal published during 1982 (340 pages), amounting to over 75 per cent of the primary journal pages. The articles are all detailed, scholarly inquiries into historical issues pertaining to Darwin, Darwinism, and evolutionary thought. A few, such as two by Frank Sulloway (No. 1, pp. 1–53; No. 3, pp. 325–396), constitute major advances in Darwin studies. Sulloway demonstrates that, when he toured the world on H.M.S. Beagle, Darwin had little understanding of the systematics of the finches on the Galapagos Islands (or, for that matter, of vertebrate systematics in general). Contrary to popular myth, Darwin’s conversion to evolutionism must have been gradual, and could not have been instantaneously catalysed by sights on the Galapagos. Sulloway writes well about matters that should interest and entertain a greater audience than just historians.

Additional symposia, which did not lead to publication, were sponsored by The American Academy of Arts and Sciences, Cambridge, Massachusetts; The Humanities Council, New York University; the Department of Biology, University of California, Riverside; the University of Washington; the Department of Religion, Florida State University (publication pending); the Department of Philosophy, University of Cincinnati; and the Department of Biology, University of Utah. The last-named was unusual in being privately funded by the Darwin scholar, Michael Ghiselin, from his McArthur Foundation prize.

CANADA

(1) Annales de la Société Entomologique du Québec, 28 (2–3): 59–91, 1983. This journal published four short review articles, with a brief introduction, on current topics in evolutionary biology. The papers were presented at a one-day, centennial symposium entitled “Le Darwinisme aujourd’hui,” in October 1982 at the Université de Montréal. Faculty from most of the francophone universities in the
province of Quebec participated. All of the articles are in French.

The Ontario Ecology and Ethology Colloquium sponsored six lectures reviewing the contributions made during the last 100 years to fields in which Darwin himself published books. The Canadian Broadcasting Corporation ran a short radio program on the creationism-evolution controversy.

MEXICO


Other Central American centennial events included a lecture series in July, 1982, at the Universidad Nacional Autónoma de México, with talks on sociological, philosophical, and biological aspects of Darwinism.

VENezUELA

The largest and most international centennial endeavor in Latin America was Darwin, a public, week-long series of evening lectures, held in November in Caracas, Venezuela. The series was sponsored by a variety of universities, museums, and private foundations. Each evening had a special theme, some with political overtones (e.g., "Darwin and Marx: Evolution vs. Revolution," and "The Crisis of Capitalism: Toward a Darwinian Death?"). To the best of our knowledge, no publication is planned.

SOUTH AFRICA

(1) South African Journal of Science, 78(7): 268–287, 1982. There are three articles here, originally delivered as Darwin centenary ad-
dresses at the University of Witwatersrand in April, plus one article from the symposium discussed below. Two of the articles are non-controversial popular reviews aimed at the lay public. The material covered in these chapters has been covered elsewhere many times before. The third article, "Darwinism in 1982: The Triumphs and the Challenges," is written for biologists. The author, E. S. Vrba, attempts to squeeze all contemporary issues in evolutionary biology into just four pages, and the article suffers somewhat from this extreme compression. The last article in the collection is of a sociopolitical nature and only indirectly touches on Darwin or evolutionary biology.

(2) Species and Speciation, in Transvaal Museum Monographs, Elizabeth Vrba (ed.), Pretoria, in press. The papers in this collection were originally delivered at a symposium of the same name held at the Transvaal Museum of Pretoria in March, 1982. The link between this symposium and the Darwin centennial was established as an afterthought. Twenty-eight papers were on the program, and most of them will be included in the forthcoming volume. The papers are mostly of an eco-evolutionary nature, with major emphasis on macroevolution and less emphasis on molecular aspects of speciation. The concluding address from the symposium was published with the South African Journal of Science commemorative papers (see above).

We have not found any other 1982 Darwin commemoratives from African countries.

GREAT BRITAIN

(1) Darwin Up to Date (A New Scientist Guide), Jeremy Cherfas (ed.), 72 pp., published by IPC Magazines for New Science Publications, London, 1982. This soft-bound volume is made up of 22 articles reprinted from the New Scientist. The focus is on contemporary controversy in evolutionary biology (e.g., creationism, punctuated equilibria, and Lamarckian mechanisms in molecular biology). These reprints from the New Scientist provide a somewhat prechewed, and therefore easy to digest, survey of evolutionary biology, from the origin of life to the evolution of man. A few articles treat Darwin himself. There is disagreement among au-
thors, who exhibit sharply contrasting views of macroevolution, sociobiology, and neo-
Lamarckism. There is also a great diversity of implicit methodological viewpoints, from
the inductivism of Edward Hinde, in “Dar-
win’s Greatest Work,” to the axiomatic ap-
proach of the cladists, in two articles on this
systematics methodology. Darwin Up To Date
is something of a smorgasbord of ideas and
concepts—the consistency and comprehen-
siveness that one might want in an under-
graduate textbook is lacking, but the book is
rich enough to serve as supplemental reading.

(2) Evolution Now: A Century after Darwin,
John Maynard Smith (ed.), 239 pp., pub-
lished in the U.S.A. by W. H. Freeman &
Co., San Francisco, and in Great Britain by
Nature, in association with Macmillan, Lon-
don, 1982. This is a reprint collection of two
dozen articles, the majority reprinted from
Nature. Maynard Smith provides a general
introduction as well as explanatory com-
ments between some of the chapters. Evolu-
tion Now takes a unique approach among cen-
tennial literature in its attempt to build a
unified volume out of reprints of current, pri-
marily review articles on controversial fields
in evolutionary biology. The volume suc-
ceds because of the lucid, judicious in-
 introductory material by Maynard Smith. In
many ways, it is eminently suited to ad-
vanced undergraduate courses on evolution.

Yet there are several serious problems with
this book. The table of contents is woefully
inadequate, dividing the book into overall
topics, without listing the titles or authors of
the individual articles. Nor is there an index.
The choice of topics is very contemporary
but rather limited; although this is perhaps
excused by the title. Topics like electropho-
retic variation, which were popular ten years
ago, receive little or no attention. Cladist
and Lamarckian controversies, which ran
big in Nature during the last few years, are
given much more attention than some might
feel they deserve. Nonetheless, this book
should stimulate biologists who do not nor-
mal work on evolution, without unduly
confusing them—a notable accomplishment.

(3) Darwin Centenary in Biologist, Journal of
the Institute of Biology, 29 (2): 71–88, 100–117,
1982. The Biologist provides a collection of
eight succinct and sensible articles. Some are
reprints, but most were specially commis-
sioned for this commemorative. Three pieces
are diversionary in nature: a reprint of T. H.
Huxley’s 1882 eulogy for Darwin from Na-
ture, a history of Down House, and a reprint
of a 19-year-old article on Darwin’s famous,
undiagnosed, chronic illness. Three of the re-
mainig articles focus on a particular aspect
of Darwin’s research, providing insight into
his work and relating it to present lines of in-
quiry. The subjects covered this way are ani-
mal breeding, sexual selection, and experi-
mental botany, treated by J. Clutton-Brock,
T. R. Halliday, and P. Bell, respectively.
R. J. Berry provides a survey of the present
status of Darwinism, given creationism,
punctuated equilibria, neo-Lamarckism,
and the like. This was a common format for
centennial articles, and Berry’s version is
creditable enough, given its brevity (5 pp.).
The most unusual article from this collection
is B. C. Goodwin’s “Biology without Darwin-
ian Spectacles,” which argues against evolu-
tionary biology in favor of a “universal gener-
ative field” theory for explaining biological
form. Goodwin’s article is hardly appropriate
as a Darwin commemorative, given the ex-
tent to which he rejects Darwinism.

(4) Biological Journal of the Linnean Society,
17(1): 1–125, 1982. This journal issue, which
was devoted solely to offering homage to
Darwin, has been reissued as a book by the
Linnean Society. Its nine articles deal exten-
vively with historical aspects of Darwin, his
family, and his life. The articles are not writ-
ten strictly for contemporary evolutionary bi-
ologists or for historians, but try to present
Darwin in a way that will interest both scien-
tist and humanist. The collection is a bit un-
even, although it is most revealing about the
nature of Darwinian studies today. It in-
cludes many articles that we found fun
reading. From this volume one can learn a lot
of Darwin trivia (e.g., what was the name of
his dog? or which servants from Down House
attended the funeral in Westminster Abb-
ey?). One cannot help being impressed by
how much we now know about Darwin’s life
and how unlikely it is that we will discover
much more strictly factual information in the
second post-Darwin century. An article by J.
R. Moore, entitled “Charles Darwin Lies in
Westminster Abbey,” reads with the sus-
pense of a good detective story. Ernst Mayr's
ten-page epilogue is as concise and readable
an account as one could find anywhere on
historical reasons for opposition to Darwin
and current views on the validity of Darwin's
ideas. F. B. Churchill's article, "Darwin and
the Historian," reviews the progress of histori-
cal studies of Darwin over the past century
and is itself something of a landmark. Chur-
chill's paper indicates that we have reached
the point where so much has been said about
Darwin that the study of the study of Darwin has
itself become legitimate scholarship.

(5) Biological Journal of the Linnean Society,
20(1): 1–135, 1983. This issue contains an in-
roduction by R. J. Berry plus eight out of 18
papers presented at a symposium entitled
"Darwin—A Hundred Years On," held in
London, in September of 1982. The stated
intent of the symposium, co-organized by the
Linnean Society of London and the System-
atics Association, was "to explore disci-
plines (other than evolution) which have
been illuminated by Charles Darwin, and to
review some of the developments that have
taken place since he worked in them" (p. 1).
Only half of the articles properly fit these
criteria. Few of the authors summarize what
Darwin did within the fields of study under
review. Some not only fail to identify Dar-
win's contributions but, worse still, cite Dar-
win only through secondary sources. Most
authors explicitly discuss evolution, des-pite
the editor's introductory comment that the
purpose of the original symposium was to ex-
plor e disciplines other than evolution. The few
articles that do fit within the prescribed struc-
ture of the symposium are excellent. A. J.
Southward and D. J. Crisp, in two successive
articles, make Darwin's contributions to the
biology of barnacles understandable and in-
teresting to the non-zoologist. Southward
convincingly links Darwin's work on barna-
acle systematics to the development of his
ideas on evolution. Although the other
papers in this collection do not hang together
on a single thematic hook, most are solid
reviews that will be of interest to researchers
in specific fields. These include M. William-
son on Hawaiian Drosophilidae; T. P.
Scoffin, J. E. Dixon, and R. N. Hughes with
two articles on coral reefs; D. H. Janzen on
seed and pollen dispersal; J. H. Crothers
concerning natural selection on dog-whelk
shells; and A. G. Marshall on the biology of
frugivorous bats.

(6) Evolution from Molecules to Men, D. S.
Bendall (ed.), 594 pp., Cambridge University
Press, Cambridge, 1983. This volume
consists of essays which, to quote the pub-
lisher, "attempt to identify the outstanding
scientific problems as they appear to the most
able exponents of the subject one hundred
years after the death of Charles Darwin"
(book jacket). The papers were presented at
the Darwin Centenary Conference in June
and July, 1982, at Darwin College, Cam-
bridge University.

Of all the centennial literature, this vol-
ume has the best claim to "official" status, be-
cause of its association with Darwin College.
As the Master of Darwin College has un-
abashedly pointed out in the Preface, his in-
titution bears the Darwin name and the
book features an essay by a Huxley. In spite
of its slight air of pomposity, this volume
does, indeed, seem to be the definitive scien-
tific commemoration of the centennial. No
other centennial collection known to us, pub-
lished or in press, has the same combination
of depth and breadth, where the scientific
aspects of contemporary evolutionary biol-
ogy are concerned. Over a quarter of the
book deals with molecular and cellular evolu-
tion, one of the most exciting fields to have
developed in evolutionary biology since the
last centennial, in 1971, commemorating the
publication of The Descent of Man. Two arti-
cles, "Evolution of Gene Families: The
Globin Genes," by Alec Jeffreys et al., and
"The Primary Lines of Descent and the
Universal Ancestor," by Carl Woese, deserve
special mention. Several of the chapters are
historical and humanistic in their focus. For
a detailed scrutiny of a truly powerful mind
at its pinnacle, M. J. S. Hodge's "The Devel-
opment of Darwin's General Biological The-
orizing," is the best of its kind. Ernst Mayr's
"Darwin, Intellectual Revolutionary" is an
exuberant rendering of Darwin as the most
revolutionary scientist known to history.
This book does more than any other centen-
nial publication to give the reader a sense of
where evolutionary biology has been, is now,
and where it may be going.

Since 28 disparate essays compose the
book, it is not surprising that some have deficiencies. The lead-off article by Sir Andrew Huxley, "How Far Will Darwin Take Us," concludes with an embarrassing plea for research on "paranormal phenomena" as the best way of dealing with the question of the evolution of consciousness. Garland Allen's article, "The Several Faces of Darwin: Materialism in Nineteenth and Twentieth Century Evolutionary Theory," is a historical examination of the foundations of population genetics in the framework of Marxist epistemology. Although it is a clear and readable introduction to the application of dialectic thinking to evolutionary biology, it seems more appropriate for the East German volume, Darwin Today (see below), than for this Cambridge symposium.

Manfred Eigen's contribution, "Self-Replication and Molecular Evolution," makes one feel that Eigen has a profound understanding of the biochemical foundations of Darwinism, but his understanding does not easily reach the reader. This may be because of translation problems. Richard Dawkins seems to be trying to redo Herbert Spencer's a priori evolutionism, perhaps inadvertently. His contribution, "Universal Darwinism," is something of an intellectual high-wire performance, risky because so much evolutionary biology is being done strictly on the basis of verbal syllogism.

Most of the remaining essays consist of reviews by famous evolutionists of well-known opinions, theories, or findings. This is not regrettable, pace Richard Lewontin, as we have here the best evolutionary biology talent in the world, from molecular biologists such as François Jacob and Carl Woese, to population geneticists such as Richard Lewontin himself and John Maynard Smith. The colorful mosaic of neoDarwinian thought these authors provide is a fitting centennial tribute.

There were several other centennial events in Great Britain. Thames Television in London produced a series of six half-hour educational television shows under the title of The Evolution of Darwin. Participants included Andrew Huxley, John Maynard Smith, and Richard Dawkins. The theme for the London gathering of the British Society for the History of Science in the centennial year was Darwin's attitude toward life. Publication of those papers is still pending. Some other centennial events that did not lead to publication include an international evolutionary biology symposium at University College, London; an international travelling museum exhibition entitled, Charles Darwin 1809–82, arranged by the British Council; an exhibit of Darwin's own philately mounted by the Postal Services; and, not surprisingly, a special photo-essay exhibit at Darwin's Down House, in Kent, designed to augment their permanent display.

SCANDINAVIA AND FINLAND

(1) Evolusjonsteoriens status i norsk Forskning og samfunnsdebatt, Nils C. Stenseth and T. Lie (eds.), Glyndal Norsk Forlag, Oslo, 1984. This book (title translation: "The Role of Evolutionary Theory in Science and the General Debate") is derived from a similarly titled commemorative conference held in March at the University of Oslo. Of 19 primary contributors, slightly more than half of them deal directly with biological aspects of evolution. The remainder are of a more philosophical cast, their interests ranging from sociobiology to Christian fundamentalism.


(3) Eidema, 1(3): p. 124–155, 206–220, 1982. Three articles on Darwinism in Finland appeared in this journal, one of them in English. Two of the papers were presented orally in February at the Second National Conference on the History of Finnish Biology, Lammi Biological Station.

The leading biological society in Finland, the Societas Biologica "Vanamo," held two commemorative lectures. The centennial also received extensive national newspaper and radio coverage in that country.
THE NETHERLANDS

(1) Darwin—herdenking 1982, in Vakblad voor biologen, 62(21): 419–444, 1982. This journal, the official organ of the Koninklijke Nederlandse Botanische Vereniging en van de Nederlandse Dierkundige Vereniging, published a series of six articles, plus an Introduction, on the centennial. The last article discusses a special exhibit at the Blijdorp Zoo. The others review, in general terms, Darwin’s contributions to specific sciences (e.g., botany, geology) with some attention to recent developments in these fields. This commemorative is the equivalent in scope and design to the British Biologist and the American BioScience commemoratives.

The Blijdorp Zoo in Rotterdam published a booklet and held a series of lectures with the Dutch Zoological Society to accompany their special centennial exhibit, “Évolutie-100 jaar na Darwin.”

BELGIUM

(1) Evolution, 160 pp., Centre d’Action Laïque, l’Université Libre de Bruxelles, 1983. This book, in French, is a collection of four public lectures: two chapters are on Darwin’s geology and biology, respectively; the third is on thermodynamics and evolution; and the last is on the social implications of Darwinism.

Although Evolution is the only Belgian collection of centennial essays that we have identified, several unpublished, commemorative lecture series were sponsored by the “Union of Old Student’s Moral Sciences” (philosophy) at the University of Ghent, the Belgian Society of Geology, and the Humanistic League. There were also special television shows, radio broadcasts, and newspaper coverage of the centennial in Belgium.

FRANCE

(1) De Darwin au Darwinisme: Science et idéologie, Y. Conry (ed.), 284 pp., J. Vrin, Paris, 1983. This volume is the proceedings of an international conference of the same title organized by Y. Conry and held at the Centre d’histoire et d’epistémologie des théories scientifiques et des doctrines philosophiques de l’Université de Picardie, Paris-Chantilly, in September of 1982. A consortium of professional societies, largely in the area of the history of science, from many different countries (e.g., France, Mexico, England), is listed as patron of this event. Seventeen people, mostly historians, participated in the conference which, according to a synopsis in the July 9 issue of Le Journal de l’Université de Picardie, was the only conference held in France to commemorate the centennial of Darwin’s death. It may, however, have been the only one receiving national financial support, through the Ministry of Research and Industry.

(2) Cent ans après Darwin: L’origine des espèces in Sciences et avenir, 38: 5–98, 1982. Under the direction of Jean-Louis Lavallard, a full issue of Sciences et avenir was devoted to the centennial. The 15 articles in this series are popular review pieces, predominantly of a biological nature.

(3) Raison présente, 66: 3–116, 1982. A special issue of this liberal, humanist journal was devoted to Darwin and Marx. G. Gohau, T. Conry, R. Zuzzo, and D. Lecourt each contributed a feature essay to this special issue.


(5) Darwin et le Darwinisme, 119 ms. pp., publication pending. This manuscript comes from a lecture series given in April, 1982, at the University “Paris Sud,” Orsay. The series was sponsored by Centre Interdisciplinaire d’Etude de l’Evolution des Idées, des Sciences et Techniques.

(6) Actes du colloque sur l’évolution: L’évolution, depuis Goethe, Cuvier et Darwin jusqu’à aujourd’hui in Les annales du C.E.H.N., in press. This is the proceedings of a symposium held in September-October, 1982, at the Université P. et M. Curie (Paris VI), and organized by the Centre d’Etude sur l’Evolution de l’Homme et de la Nature (C.E.H.N.) with the assistance of the Goethe Institute (the German Cultural Center of Paris). It was planned as a triple commemorative to honor Goethe, Cuvier, and Darwin.
(7) *Prospective et santé*, No. 24 (Winter issue), 1982. Included here are four articles on Darwinism and the evolutionary origins of man.

(8) *Modalités rythmes, mécanismes de l’évolution: Gradualisme phylétique ou équilibres ponctués?*, 337 pp., Colloques Internationaux du Centre National de la Recherche Scientifique (C.N.R.S.), No. 330, Paris, 1983. This volume comes from a massive gathering of evolutionary biologists and paleontologists in May 1982 in Dijon, and organized by J. Chaline. There are forty chapters collected under three headings: “Les concepts et les théories de l’évolution biologique,” “Les tests paléontologiques de l’évolution biologique,” and “A la recherche des mécanismes de l’évolution biologiques.” Recognition of the centennial was made by several of the participants and was a focus of the introductory lecture, although the conference was not strictly convened as a centennial event.

(9) *Darwin* in The Unesco Courier, 5: 3–38, 1982. The *Unesco Courier* is edited in Paris, but published in 26 languages, including English. It is a strictly popular, nonacademic journal. The May issue was dedicated entirely to the centenary, including brief, lightweight pieces by the popular science writers, I. Asimov and M. Pyke, and by a historian of science, P. Thuiller. A surprising and out-of-place inclusion is a three-page essay on the reasons why he doubts organic evolution by the astronomer, N. C. Wickramasinghe.

Both the Muséum national d’histoire naturelle in Paris and the Société zoologique de France also held lectures in commemoration of the centennial. There were other isolated lectures given and articles published in 1982 in France by internationally recognized scholars in honor of Darwin. These ranged from lectures on “Darwinism and immunology” to articles on the ideological implications of Darwinism in national communist journals. Several of Darwin’s books were reissued, along with new books about him (“Editions Complexe” series) in honor of “L’année Darwin.”

Ironically, the extensive attention given the centennial in France seems to be somewhat unrecognized and unappreciated in that country, at least by its biologists. Several French evolutionary biologists with whom we corresponded were quick to assert that little was done to celebrate the centennial in their country, although the list presented here shows that this was not the case. Many French biologists were vexed by what they thought was hostility toward Darwinism among their countrymen. They offered us complex explanations for why the Darwin centennial was downplayed in France. These involved a presumed lingering background of Lamarckism, anti-British sentiment, and church-dominated ideology. In retrospect, although these explanations may have some truth, they are largely unnecessary, given the extensive attention in fact given the centennial in France.

**WEST GERMANY**

(1) *Darwin und die Evolutionstheorie*, in Dialektik, 5: 7–167, 1982. Published by Pahl-Rugenstein Verlag, Cologne, *Dialektik* is a serial that deals largely with issues in philosophy and political science. The Darwin commemorative issue consists of 14 articles, the majority of which concern either Darwin’s scientific methodology or the social and political implications of Darwinism.

(2) *Anthropologie nach Darwin—Evolutionstheorie, Darwinismus und die Frage nach dem Menschen*, No. 190, 1–132, 1982. Six authors contributed to this volume, introduced by Helmut Schmidt, and produced by the Evangelical Academy of Kurhessen-Waldeck, Hofgeismar, which also sponsored the conference from which the papers are derived.

There were Darwin lecture series and symposia, which did not lead to publication, at universities in Kiel, Mainz, and Aachen. The series in Kiel accompanied a commemorative exhibition which was produced there by the Zoologisches Museum, and which travelled to Hamburg, Mainz, Braunschweig, and Ingolstadt.

**AUSTRIA**

The major commemorative events in Austria were a symposium sponsored by the Austrian Society for the Study of Natural Science
and an exhibition entitled *Evolution und Kosmos*, both in Vienna.

Brigitte Hoppe, Institut für Geschichte der Naturwissenschaften der Universität, München, has produced a longer list of the Darwinian papers and speeches given in 1982 in West Germany and Austria. Her article, “Forschungen über den Darwinismus in den vergangenen Jahren und das Darwin-Jubiläum 1982 in deutschem Sprachgebiet,” is to be published by Il Mulino, of Bologna, Italy.

**SPAIN**

(1) * Arbor Ciencia, Pensamiento y Cultura, 113:7–175; Sept.–Oct. 1982 issue.* This is a special issue of 11 diverse articles dedicated to “Darwin y al Evolucionismo.”

(2) *Revista de Occidente, 4(18/19), 1982.* This special, combined issue was entitled “Charles R. Darwin: La Evolución y el Origen del Hombre.” Thirteen review articles are included, several of which are translations of articles published previously in English by non-Spanish authors.

(3) *La teoria de l'evolucion als 100 anys de la mort de Darwin, J. Nadal (ed.), published by the Faculty of Biology and the Rector's Office, University of Barcelona, in press. This volume is derived from a three-day conference in November and December 1982 at the University of Barcelona. Although most chapters will be in Spanish, some will be in English. Twelve rather diverse talks were given at the original conference. They ranged from theories on the origin of life to the history of science. This was the most international of the Spanish commemorative conferences.*

(4) *Conmemoración del Centenario de Darwin* 216 pp., Royal Academy of Sciences, Madrid, 1983. This book comes from a conference of the same title held in November and December, 1982, with ten speakers. The conference was sponsored by the Sección de Ciencias Naturales of the Real Academia de Ciencias, Exactas, Fisicas y Naturales, Madrid.

(5) *L'any Darwin: L'homentage Català del 1982,* in Ciència Revista Catalana de Ciència i Tecnologia, 2(17): 4–47, 63–64, 1982. This journal from Barcelona devoted its June issue to the centennial. There are seven articles, including translations and reprints of articles by François Jacob and George Gaylord Simpson, an editorial, and a humorous essay. *Ciència* published additional articles and reports throughout the year on centennial activities in Barcelona and elsewhere in Spain.

(6) *Anales Real Sociedad Española de Historia Natural, Madrid,* in press. The Spanish Natural History Society held a commemorative conference on April 19, 1982, and the proceedings are to be published in their annals. There were six speakers.


(8) *El Darwinismo en España: En el 1er Centenario de la Muerte de Ch. Darwin (1809–1982),* in Anthropos Boletin de Información y Documentación, 16–17: 1–96, 1982. Fourteen articles, dealing largely with the history of the reception of Darwinism in Spain, make up this special October issue of *Anthropos.* Included is a very extensive bibliography of Spanish literature on evolution and Darwin, from 1853 to the present. The December issue of *Anthropos* (#20) includes a partial list of events held in Spain and publications generated there by the centennial.

(9) *Mundo Científico,* 13, 1982. The April issue of this journal (the Spanish edition of the French journal La Recherche) included not only translations of articles published in the parent journal, but additional articles by Spanish authors. One intriguing article explores political biases in the reports of Darwin's death in the 1882 Spanish press.

(10) *Revista de Biología de la Universidad de Oviedo,* No. 1, 1982. This volume is based on Homenaje a Charles R. Darwin en el Centenario de su Muerte, a series of four lectures organized by the Faculty of Biology, University of Oviedo, plus some contributed papers on biological subjects. This university also offered, through its extension centers in the cities of Avilés and Oviedo, a special course on evolution.

(11) *Charles Darwin 1809–1882,* in LLUC, No. 706: 3–27, 1982. LLUC is a progressive Roman Catholic review published in Majorca, in the Catalan language. The seven articles in this collection include a review of the various ways in which the centennial was commemorated in Majorca. Most of the
pages are taken up with a layman-level article on Darwinian evolution. There is, however, a two-page review of the evolution-creationism debate.

The centennial was also commemorated by lecture series at schools and universities in Madrid, Valladolid, and A vilés. There was a public lecture series in Reus and a large variety of commemorative events for the public in Barcelona—e.g., a museum exhibit (with an accompanying booklet), a lecture series, a large film series, an exhibit of textbooks on Darwin and Darwinism from 1867 to 1911 (at the Catalan Library, the Biblioteca de Catalunya). The lectures were held at the Cultural Center of the bank, La Caixa de Pensions, and were sponsored by the municipality through the government agency, Servei del Medi Ambient of the Diputacio de Barcelona, which also published a commemorative booklet.

The above list for Spain is undoubtedly incomplete. Thomas Glick of Boston University (author of Darwin en España, Col. Libros de Bolsillo 574, Ediciones Peninsua, Barcelona, 1982) has documented the explosion of interest in Darwinism in contemporary Spain and has speculated about its causes. Concerning the 1982 centennial in Spain, he has reported (in July/August, 1983, Bostonia, p. 16) that “There were grand festivals, not only in large cities like Barcelona and Madrid, but in tiny towns all across the country. Mayors of towns of less than 50,000 population were making proclamations lauding Darwin and towns were inviting speakers to lecture about evolution.” Our data suggest that there is little hyperbole in this statement.

ITALY

The amount of attention given Darwin and his ideas in Italy in 1982 was enormous. Antonello La Vergata has an article in press entitled L’anno darwiniano in Italia (see below), wherein he attempts to compile a list of all the public gatherings in Italy in 1982 honoring Darwin, and to offer some explanation for current Italian interest in Darwin and his work. We have tried to identify representative activities, as well as the most important gatherings and publications. The reader may wish to refer to La Vergata’s article for more details.

(1) The Darwinian Heritage, David Kohn (ed.), 2 volumes, to be published jointly by Princeton University Press and Nova Pacifica, Wellington, New Zealand, in press. Derived from a large symposium sponsored by the Florence Center for the History and Philosophy of Science at the Palazzo Vecchio—Villa di Mondegg in June, 1982, The Darwinian Heritage promises to be the most comprehensive of the centennial publications with an historical focus. Twenty-seven speakers and commentators were listed on the original program. There are ten chapters, covering several hundred pages. [In April, 1982, the Florence Center also sponsored a colloquium on “Evolutionary Biology: Fundamental Theory,” in which Stephen J. Gould and Richard C. Lewontin were the featured speakers, but this was not billed as a centenary event.]

(2) Giornate Lincée indette in occasione del 1º centenario della morte di Darwin, in Atti dei Convegni Lincei, Accademia Nazionale dei Lincei, 56: 1–222, 1983. The publisher of this series is the Italian National Academy of Science. In April it held a commemorative symposium from which the seven papers presented here are derived.

The participants were all Italian scholars with the exception of S. J. Gould, whose chapter is a reprint, in English, of his February 1982 article in Discover. One other article, on mating types in plants, is also in English; the rest are in Italian. Transcripts of the discussions that followed the oral presentation of the papers are included. The first two papers, along with the discussion they generated, deal with the philosophy of science (e.g., “the speculative tradition in Europe”; “the philosophical importance of Darwin”) and fill the first 100 pages. The remaining articles are reviews of Darwin’s ethological, geological, and paleontological contributions, with an excursion into a contemporary study of European paleoanthropology.

(3) Darwin: The New Idea of Life, in Scientia 118: 1–344, Nov. 1983. This journal has presented a series of essays by some of the major scholars on evolutionary theory and the history of science. To quote the publisher, “Our goal is to offer readers an ex-
haustive picture and update on the status of evolutionary studies and the debates originating from them" (pers. commun., translation). This goal is simply too broad to be achieved in one volume of ten chapters. But within certain limited areas (e.g., the history of Darwinism in Italy; or the concept of punctuated equilibrium), the volume appears to have some substantive review articles, particularly of a historical and philosophical nature. Contributors include S. J. Gould, R. Lewontin, G. Montalenti, E. Mayr, P. Omodeo, and G. Pancaldi. All articles are in both English and Italian.

(4) *Immagini di Darwin*, Editor Riuniti, Rome, in press. This book comes from a three-day lecture series sponsored in October 1982 by the Section on the Theories and Methods of Science of the Istituto Gramsci, Rome. According to a participant, the talks were far-reaching explorations into Darwinism within and outside of biology. Nine long papers and 11 shorter ones from this symposium are to be included in the volume.

(5) *Darwin: Problemi di un centenario*, Walter Tega (ed.), Il Mulino, Bologna, in press. This book comes from a conference of the same name held at the Istituto Gramsci, Bologna, in December, 1982. B. Hoppe and A. La Vergata, whose articles on Darwinism in Germany, Austria, and Italy have been mentioned above, presented their papers at this conference.

(6) Milan Darwin Conference (proceedings, in press). A two-day conference, entitled “Darwin oggi,” was jointly sponsored by the Museo Civico di Storia Naturale di Milano, the magazine *L’Espresso*, and the City Council of Milan. Many prominent Italian scholars in history and science participated in this event. According to one participant, over a thousand students and teachers attended each session. The Museum also had an exhibit, “Charles Darwin, l’origine delle specie,” and published an accompanying booklet. The Museo di Scienze Naturali held a panel discussion on evolution.

(7) *L’eredità di Darwin*, Facoltà di Magistero, Università di Messina, in press. This is the proceedings from a two-day conference in Messina in May. There were six talks by biologists, philosophers, and historians.

(8) *Naples Darwin Commemorations*. The Stazione Zoologica di Napoli celebrated the centenary in a variety of ways: (1) they had a special exhibit on Darwin’s letters and his contacts with the Zoological Station in Naples; (2) they published the *Charles Darwin-Anton Dohrn Correspondence* (Macchiarioli, Napoli, 1982); and (3) they held a one-day symposium (four speakers) in July, 1982. In addition, the Università degli Studi di Napoli held a ten-speaker symposium in November.

(9) *L’uomo di Saccopastore e il suo ambiente*, Università degli Studi di Roma, La Sapienza, Istituto di Antropologia, Rome, 1982. This booklet was produced to accompany a special commemorative exhibit, lecture series, and round-table discussion, held in Rome, December 1982 and January 1983. The focus was on paleoanthropology. The Comune di Roma and the provincial government cosponsored more general commemorative exhibit at the Centro Sociale Malafronti in Rome, with an accompanying lecture series.

(10) *Panorama*. Throughout the centennial year this popular magazine published more articles on Darwin and Darwinism than any other popular magazine or newspaper in Italy.


(12) *L’Espresso*, No. 13. This national weekly magazine published a special supplement with its edition of April 4, 1982. The multi-authored work was entitled “Come si diventa uomo.”

(13) *La Repubblica*. By one account, this newspaper published the best series of commemorative articles on Darwin to appear in any Italian daily.

(14) *La Nazione*. This newspaper from Florence published three short commemorative pieces in an April 1982 issue.

Other popular magazines and newspapers which ran features on the centennial include the *Corriere della sera* and *L’Unità*.

Additional local lectures, round-table discussions, and conferences were organized by universities in Modena, Cosenza, Pavia, and Genoa; by municipal governments, public education boards, and city councils in Arez-
Greece

(1) Materia Medica Greca, 10: 455–528, 1982. This journal produced a special issue honoring Darwin. Three articles (pp. 459–480) deal with Darwin’s influence on modern scientific thought and Darwinism in Greece. Six other papers are original contributions in genetics and medicine.

Other commemorative pieces appeared in the February and December 1982 issues of Kathimerini and in the Marxist review Epistimoniki Skepsi (No. 10). The major public event was a lecture series and round-table discussion at the Athens Municipal Cultural Center organized by the Panellinos Enosis Viologon (all-Greek Union of Biologists). The principal speakers, however, were not evolutionary biologists, but humanists and Marxist philosophers. Concerning the centennial celebrations in general, C. Krimbas, the leading scholar on Darwinism in Greece, reported (pers. commun.) that they started rather late, continued into 1983, and then merged with the centennial of Marx’s death. In support of Krimbas’s observation, centennial commemoratives for Marx in the journals Anti (No. 234), Synchrona Themata (No. 17), and Epistimoniki Skepsi (No. 12) all address issues of the relationship of Darwinism to Marxism.

East Germany
(Deutsche Demokratische Republik)

(1) Darwin Today, Erhard Geissler and W. Scheler (eds.), 347 pp., Academy of Science of the DDR, Research Center for Molecular Biology and Medicine, Berlin, 1983. This book consists of 34 chapters, 33 of which are in English, and the edited transcripts of the discussions that followed the oral presentations of these papers at the 8th Kühnborn Colloquium on Philosophical and Ethical Problems in Bioscience, Kühnborn, November, 1981. The Society of Physical and Mathematical Biology of the DDR and the Central Institute of Philosophy of the Academy of Sciences participated in the organization of the Colloquium, which was sponsored by the UNESCO Commission of the DDR and supported by UNESCO.

Darwin Today is the only centennial publication from Eastern Europe with much western participation; however, its contributors from continental Europe outnumber native English-speaking contributors by ten to one. The volume features an explicitly Marxist slant: “At the present colloquium all problems were discussed in light of dialectical materialism . . .” (p. 343). One article has a reference list of nothing but the works of Marx, Engels, and Lenin. Many of the articles mention Marx or Engels in the first paragraph, if not in the first sentence. Moreover, as claimed, most articles are in the style of Friedrich Engels’ Dialectics of Nature. We learn that “Darwin developed in his works the principle of dialectic philosophic concepts on qualitative changes resulting in the accumulation of small quantitative changes . . .” (M. S. Ghilarov, p. 73). The dialectical materialism is occasionally supplemented with Lamarckism. In the chapter “The relation between Darwin’s and Lamarck’s concepts in the light of the today biology [sic],” V. J. A. Novák argues that “. . . none of the ‘evidence’ against the ‘heredity of acquired characters,’ i.e., the inheritance of ontogenetic adaptations, stands up [to] a thorough analysis” (p. 87). Some of the authors
do not accept recent Anglo-American ideas, such as kin selection (R. Grantham, p. 323). They interpret the professed leftist attitudes of Gould or Lewontin as nothing more than "superficial Marxism" (quotation from the discussion following M. Ruse's chapter, "The ideology of Darwinism"), and thus they dissociate themselves from the punctuated equilibrium theory, in spite of its compatibility with Engels' dialectical materialism. This apparently puzzled M. Ruse, whose article in *Darwin Today* explicitly treats the interaction between ideology and evolutionary biology by using Lewontin and Gould as prime examples. For readers who are not familiar with current subleties in Soviet interpretations of Marx and Engels, many of these articles will be difficult reading.

A number of articles diverge from the approach laid out by the organizers. R. D. Keynes, a great-grandson of Darwin, and R. Colp contribute Darwiniana. E. Broda writes about Ludwig Boltzmann as a Darwinian. Most of the nondialectical articles review well-known biological material in uneven English, the best of them being "Evolution of Polynucleotides," by P. Schuster, and "Effect of Cultural Evolution on Biological Evolution in Man," by F. Vogel.

(2) *Biologische Rundschau*, 21:73–102, 143–154, 1983. Here are three articles originally presented in July, 1982, at the meeting of the Biologische Gesellschaft der DDR, in Halle. Although the meeting was declared a commemorative, the integrating theme was "Constancy and Variability in Biological Systems." Many of the invited papers have not yet been published; those that have deal respectively with evolution and cognition (R. Riedl), parasitism and evolution (K. Odening), and physical anthropology at the time of Darwin (H. Grimm).

(3) *Deutsche Zeitschrift für Philosophie*, 30: 293–432, 1982. This journal devoted an entire issue to "Philosophie und Biowissenschaften zum 100. Todestag Darwins." There are nine feature articles plus several essay-reviews in this collection; all are in German. Many of the articles deal with sociopolitical implications of Darwinism. Translations of titles for those articles with some focus on biology include: Darwin's Theory of Evolution Today (R. Löther); Darwin's Influence on the Modern Conception of Biological Knowledge (I.T. Frowol); Darwin's Principle of Selection—Dialectics and Metaphysics (G. Pawelzig); Sociobiology under Discussion (B.H.J. Eichler); and Philosophy and Biology in the 19th Century (K. Wenig). There is also a long review of the 8th Kühlingsborn Colloquium mentioned above.


Johann Wolfgang von Goethe died 50 years before Darwin. The Kulturfund der DDR, Kommission Wissenschaft des Präsidenten des Festivals Berlin der Goethe-Gesellschaft held a combined commemorative under the theme, "From the 'Metamorphosis' to the 'Origin of Species.' " To the best of our knowledge this has not yet been published.

**CZECHOSLOVAKIA**

(1) *General Questions of Evolution*, V. J. A. Novák and K. Zemek (eds.), 412 pp., Czechoslovak Academy of Sciences, Praha, 1983. This volume is derived from an International Working Colloquium held in Liblice in August. Virtually all of the participants are from Eastern Europe, although the book is in English. Much of the biology in this volume is deeply embedded in philosophical discourse. Its 30 chapters are sorted into the following five sections: General and Generally Methodological Problems of the Evolutionary Approach; Evolutionary Approach in other Scientific Disciplines; Structural Levels in Biology from the Point of View of the Philosophy, Methodology and Theoretical Biology; Application of the Evolutionary Approach to the Various Levels of Biological Organization and to Systematics; and Neoteny as One of the Most Important Heterochromies and the Evolutionary Consequences.

A small, one-day scientific conference to commemorate Darwin was held at the National Museum of Prague. This remains unpublished.
ROMANIA

(1) *Magazin Istoric*, 26(12): 48–52; 27(5): 33–34; 1983. This popular history magazine contained two articles on Darwin for the centennial. The commemorative was also reported in the popular science journal, *Scintea*.

The Alexander I. Cuza University in Iași, in conjunction with the National Academy of Science, held a commemorative symposium, as did the Biological Section of the National Academy in Bucharest. Speakers included regular members, corresponding members, and researchers from the Biological Center of Cluj.

HUNGARY

There was a one-day Darwin symposium on the centennial day of his death held by the Hungarian Academy of Science and the Hungarian Biological Society in Budapest. There are no plans to publish the proceedings.

BULGARIA

(1) *Priroda y znanie*, No. 5: 15–20; No. 6: 2–18, 1982. This magazine, the organ of the Bulgarian Natural History Society, published eight short (1- or 2-p.) review articles plus a two-page editorial on Darwinism in Bulgaria. On the centennial day the Natural History Society, along with the Biologist Group of the Research Workers' Union, cosponsored a series of five commemorative lectures. Abstracts of these talks form the core of the *Priroda y znanie* commemorative issues.

(2) *Nauchen zhivot*, No. 3: 7–8, 21–22, 1982. These two brief notes respectively report on the centennial and the proceedings of a meeting commemorating the occasion.

(3) *Filosofska misal*, No. 12: 74–81, 1982. The implication of Darwin's theory for present-day science is the thrust of this commemorative. Its publication was linked to a scientific session held in April in Sofia, which was sponsored by the Institute of Philosophy and the Bulgarian Academy of Science. Nine papers were presented there. Based on the titles, most were largely of a philosophical nature.

The above list does not include the attention that the centennial received in popular radio, television, and newspapers. Public interest was stimulated by a travelling exhibition mounted by the National Library and displayed in Sophia, Plovid, Pleven, and Varna.

YUGOSLAVIA

(1) *Priroda*. This popular nature journal of the Croatian Society for Natural History published three short articles on Darwin and Darwinism.

(2) *Darwinizam u Hrvatskoj* (Darwinism in Croatia: The Phenomenon of Darwinism in Croatian Natural Sciences and Society up to 1918), by J. Balabanic, approx. 200 pp., Yugoslavia Academy of Science and Arts, Zagreb, 1983.

Lecture series were sponsored by the Croatian Biological Society and by the book publisher Mladost (Youth). At least one museum, the Museum of Natural History in Ljubljana, Slovenia Province, had a special exhibit, "Darwin and Slovenes."

POLAND

(1) *Kosmos*, 32(4): 495–591, 1982. A full issue of *Kosmos* was devoted to the "Karola Darwina" centennial. Included are seven chapters, plus a preface, and an edited transcript of the discussion that followed the oral presentations of these papers in October 1982 at a meeting of the Polish Academy of Sciences (sponsored by its Biological Sciences Division and its Committee on Evolutionary and Theoretical Biology). Half the papers concern the history of biology (e.g., "Charles Darwin's Profile and Work as Reflected in Polish Scientific Journals Published in 1882") and half of them treat selected topics in evolutionary biology (e.g., "Parasitology and Darwinism"). No effort was made to be comprehensive in either field. All papers are in Polish.

U.S.S.R.

(1) *Voprosy Sovremennogo Darwinizma* (Problems of Contemporary Darwinism), K. Paaver &
T. Sutt (eds.), 190 pp., published by the Akademija Nauk Estonskoj SSR (Academy of Sciences of the Estonian S.S.R.), 1983. This volume contains 11 articles, all in Russian with English summaries. The papers were presented in December 1982 at the Institute of Zoology and Botany, Tartu State University, Tartu, Estonia.

Although the above was the only major commemorative publication to come out of the U.S.S.R., other gatherings with commemorative lectures were held in Moscow, at Moscow State University and at the Academy of Science (Institute of the History of Science and Technology); in Leningrad, at Leningrad State University; and in Ashkhabad, at the Turkmen Academy of Sciences (Institute of History).

**THE PEOPLE’S REPUBLIC OF CHINA**

(1) *Selected Papers on the Evolutionary Theory*, Chen Sicien (Chairman, ed. committee), 206 pp., published for the Academia Sinica by the Science Press, Beijing, 1983. This volume is derived from a three-day symposium which began on the centennial day of Darwin’s death. It was sponsored by the Division of Biological Science, Chinese Academy of Science, and by the Federation of Chinese Scientific Societies. The opening ceremony included addresses on the political significance of Darwinism by the Director of the Academy and the President of the Federation. These addresses were dutifully reported in the public media (television, plus the People’s Daily). The volume consists of 12 papers published in full, 54 abstracts (1-2 p.), and 18 papers presented by title only. Although all of the contributions are in Chinese, the titles are translated and give a good picture of evolutionary studies in the People’s Republic today. Nearly 75 per cent of the papers deal with the systematics and phylogenetic relationships of specific fossil and living taxa.

**SOUTH KOREA**

(1) *The Mechanism of Evolution*, in Symposium on Biological Science, Series 3, Korean Association of Biological Sciences, Seoul, 1982. Five of the six papers in this series are by Koreans and are in the Korean language. The titles indicate very general themes (e.g., The Origin of Life, Fossils and Evolution, Evolution at the Molecular Level). Approximately 1200 people attended when the papers were presented in October in Seoul. The event was organized by the Association of Biological Sciences, with partial support from the Korean Science and Engineering Foundation.

(2) *Evolution and Creation*, S.Y. Yang (ed.), 64 pp., Inha University, Incheon, Korea, 1982. This volume is the transcript of eight lectures in Korean. All address the creationist question and review the evidence of biological evolution. The lectures were sponsored by Korean Traders Scholarship Foundation and were organized by S.Y. Yang and colleagues at the Department of Biology, Inha University.


**JAPAN**

(1) and (2) *Kagaku*, 52(4): 197–286; 52(5): 296–331, 1982. A total of twelve articles commemorating the Darwin centennial appear in the April and May issues of Kagaku, which is a major general scientific journal in Japan (title translation: “Science”). Two of these are translations of articles previously published in English by S. J. Gould and G. G. Simpson. According to the publisher, Iwanami Shoten, these special issues attracted so much interest from their readers that they decided to repackage them as a soft-cover book. *Gendai Shinka-ron no Tenkai* (Development of Evolution Theory Today), edited by the staff of Kagaku, Iwanami Shoten, Tokyo, 1982, was the result. It contains all of the articles published in the April and May issues, plus several additional ones on evolutionary topics published previously in Kagaku. All are in Japanese.
NEW ZEALAND

(1) Charles Darwin: 1809–1882—A Centennial Commenorative, R. G. Chapman and C. T. Dural (eds.), 376 pp., Nova Pacifica, Wellington, 1982. Only 750 copies of this hand-crafted book have been printed. The list price in the U.S.A. is $585.00. The book contains eleven essays commemorating Darwin and his work, sorted into the following sections: Darwin Biography, Darwin and the Nineteenth Century, Darwin and the Sciences, Darwin and the Twentieth Century. Some chapters are written by professional science writers. Several of the articles are quite good, including M. Allan's chapter on Darwin's botany, J. R. Durant's insightful discussion of the intellectual climate affecting the acceptance of Darwin's theories in England, and D. Standbury's substantive, yet very readable account of the H. M. S. Beagle and its unusual crew. This last article includes the fascinating revelation that from the Beagle's officers there emerged five admirals, two fellows of the Royal Society, a member of parliament, and a governor-general, as well as doctors, geographers, and inventors.

On the other hand, the first chapter (by R. O'Hanlon) begins pretentiously with an excerpt from an ode by Horace, and many subsequent chapters are perfused with purple prose and pomposity. Some of the articles clash with each other, without editorial comment or cross-reference. For example, R. J. Berry flatly asserts that "it is possible to be both a convinced Christian and an orthodox evolutionist," while M. Ruse discusses at length the difficulty of reconciling these two beliefs.

In advertising this volume, the publisher immodestly asserts that this is "the most important work to be published in memory of the great naturalist on this occasion." In no sense, however, do the contents, or even, for that matter, the gold leaf and leather trim of the binding, justify the price. Simple editorial matters, like standardization of the citation format between chapters, have not been achieved. In its defense, it could be argued that this volume is not really supposed to be read. Indeed, its Royal Quarto dimensions make it mechanically difficult to hold, never mind read. For historiographers interested in Darwin and Darwiniana, it will be interesting to know how many copies of this volume will eventually be sold. Meanwhile, as some of the articles are well worth reading, it would be desirable to have an affordable edition of this book on the market.

DISCUSSION AND CONCLUSIONS

On April 19, 1982, the anniversary day of Charles Darwin's death, the Associated Press (e.g., the Herald Examiner, Los Angeles) ran a story asserting that the anniversary was passing with little notice. Philip Titheradge, the custodian at the Darwin Museum, Down House, was quoted as saying, "It is odd, this lack of commemoration." As our list of over 70 publications of collected works and nearly one hundred commemorative events now indicates, such regrets were premature.

It is not surprising, however, that the extensive homage to Darwin in 1982 was not fully perceived by the public media in English-speaking countries. As indicated by erroneous claims from several symposium organizers and publishers concerning the uniqueness of their product, many centennial celebrants were unaware of the commemorative activities going on, even in their own countries. Except in some of the socialist countries, there were no national or international centers for the coordination and reporting of centenary activities. There is no official clearing house for information on Darwin celebrations, although Cambridge...
University, Down House, and the Linnaean Society in London can all claim some legitimacy as repositories for this type of information in the future.

As a result of our survey, we have before us the titles of several hundred commemorative talks and articles published by scholars around the world. Although this sample is surely incomplete, it is large enough to allow a rough analysis both of how the world views Darwin and his work 100 years after his death, and of trends since the last Darwin centennials, in 1959 and 1971, commemorating the publication of *The Origin of Species* and *The Descent of Man*, respectively. We can also ask what contemporary cultural contexts are most conducive to public interest in Darwin and Darwinism.

The 1959 and 1971 centennials were observed by the publication of major commemorative collections of scientific papers—e.g., *Evolution after Darwin* (S. Tax, ed., University of Chicago Press, 1960) and *Sexual Selection and the Descent of Man, 1871–1971* (B. Campbell, ed., Aldine, Chicago, 1972). [See also comments and references on commemorative literature from previous Darwin anniversaries in F. B. Churchill's "Darwin and the Historian," *Biol. J. Linn. Soc.*, 17: 45–68, 1982.] The most recent centennial differed from these earlier ones in some major ways. Certainly the biggest differences are in (1) the sheer number of collected works published and symposia held, and (2) the international distribution of these publications and events.

It is now in vogue to talk about the "Darwin Industry," particularly in reference to the explosion of interest in Darwin among philosophers, historians, political scientists, and sociologists. Many of the biggest commemorative symposia in 1982 (e.g., "The Darwinian Heritage" conference in Florence, Italy) were organized by nonbiologists. Since the last major centennial, this interest has spread into many non-English-speaking countries. The geographic centers of this Darwin Industry came as a surprise to us. While it is true that many centennial publications have come out of England and the United States, Italy held the most symposia and generated the most centennial publications. This popularity of Darwinism among Italians is extremely recent. In fact, a major comparative, historical study of Darwinism around the world, published as recently as 1972 (*The Comparative Reception of Darwinism*, T. F. Glick, ed., University of Texas Press, Austin), did not even list Italy in its index! Spain closely followed Italy in the number of 1982 centennial events. Communist bloc, African, Latin American, and Asian countries had few Darwin symposia, particularly of an international scope.

To the best of our knowledge there were very few Darwin commemorative gatherings in New Zealand, Canada, India, or Australia—all countries under British administration during Darwin's life—despite the fact that there are active Darwin scholars and evolutionists in all of them. (One conference originally scheduled for Townsville, Queensland, Australia, was cancelled.) Evolutionists and historians in these Commonwealth countries may have felt that any centennial celebrations which they could have organized would have been eclipsed by activities in England or the United States.

In the United States, Darwin symposia were almost exclusively university-based. Elsewhere, royal societies, museums, private foundations, political organizations, and government agencies were more often the sponsors. From this distribution we conclude that Darwinism in North America is largely construed as a scientific theory within the academic discipline of biology. This is also true in countries of the British Commonwealth.

An inescapable conclusion, given the sponsorship of Darwin symposia and the titles of many of the talks, is that elsewhere in the world Darwinism is embraced for political reasons, as well as for scientific ones. Irrespective of whether Darwinism and Marxism should be intellectually allied—a point which has generated uninterrupted philosophical debate for the last hundred years—our research shows that they are so allied in most countries where English is not the primary language. Exceptions are found among such countries as Japan, which have been heavily influenced by American evolutionary biology.

The Darwin-Marx link is especially evident in Italy and Spain, where there were many commemorative museum exhibitions for the populace and where many municipal
governments held Darwin lecture series. A common sponsor of Darwin symposia in Italy was the Gramsci Institute, named after one of the intellectual founders of the Italian Communist Party. Similarly, in Spain local governmental support of Darwin centennial events consistently came from the political left. For example, many Spanish centennial publications are in the Catalan language, and many events were held in Barcelona, the Catalan provincial center. The Diputacio de Barcelona, a centennial sponsor, is under socialist administration. Historically, Catalán Spain has been far to the left of Castilian Spain.

But Marxism alone is not enough to explain the intense centennial activity in Italy and Spain. Both of these countries underwent periods of fascism during the first half of this century, as well as centuries of Church ideological domination. Recently both countries have undergone a growth in political and cultural freedom. We propose that, against this background, the Darwin centennial was seized upon as a symbolic rallying point for materialism, liberalism, and agnosticism in these countries. To the intellectual leftists in these countries who desire social change, to be a Darwinist is first and foremost a declaration of belief in the possibility, if not inevitability, of change. To much of the world, Darwinism, as an established theory for biological change, has become a symbol of the possibility of political change. It should be emphasized here that the growth of interest in Darwinism in Italy and Spain are totally independent events. Although the Darwin Industry in both countries may have similar socio-political causes and implications, we found no one in either country who was aware of the great contemporary interest in Darwinism in the other.

France and Greece share some similar political and cultural history with Italy and Spain. The growing interests in Darwinism in these countries may have similar causes.

Although Eastern European countries are formally Marxist, and Darwin is an official hero of Soviet dialectical materialism, the centennial celebrations in the communist bloc countries were relatively sedate and circumscribed compared to those of Italy, Spain, and even France. As one of our European correspondents advised us, Darwinism is "not particularly useful" at this time to Eastern European regimes, particularly those intent upon maintaining a single-party status quo. Accordingly, Darwin centennial celebrations were not as heavily promoted by Eastern European communist parties as by communist parties elsewhere in Europe.

Military control in Poland during 1982 clearly limited centennial celebrations there. In general, military dictatorships, whether from the Left or Right, did not provide a good substrate for Darwinism in 1982. We found virtually no Darwin commemoratives in countries under strict military rule. It is not surprising that theocracies also provided poor turf for Darwinism during the centennial year.

David Hull, in a recent review entitled "Evolutionary Thinking Observed" (Science, 223: 923-924, 1984), commented that "no correlation seems to exist between the reception of Darwin's theory around the world and the larger characteristics of . . . societies; at least none has been demonstrated." We now believe that our data demonstrate one such relationship: interest in Darwinism around the world seems to correlate with the expansion of the political spectrum within any country—especially the ascendance of Marxism—against a relatively recent historical background of Rightist or Church ideological domination. It is important to point out that we are not arguing that this correlation is either philosophically legitimate, or even particularly healthy for Darwinism, but, simply, that it is present and pervasive. By global comparison most scientists from the United States have a rather limited view of the implications of Darwinism.

Leaving socio-political issues aside, as biologists we had some preconceptions that there would be a positive correlation between the amount of on-going research in evolutionary biology in any given country and the formal academic attention given the 1982 centennial. In fact, we found no such correlation. The absence of such a correlation shows that the Darwin Industry stands separate from contemporary evolutionary biology. In its youth, one expects the history of a particular scientific field to develop as a spin-off of that field, perhaps as the reminiscences of its
founding fathers. As such a specialty matures, it may grow to the point where it becomes a viable entity, separate from the parent science. In this regard, it is fair to say that the Darwin Industry, which showed its first real growth spurt at the centennial of *The Origin of Species* 25 years ago, has now become a mature specialty within the history of science, independent of contemporary evolutionary biology.

A final note: it is 25 years to the next big event, the bicentennial of Charles Darwin’s birth

ACKNOWLEDGMENTS


The junior author is a University Research Fellow. Both authors thank the Natural Sciences Engineering and Research Council of Canada for its support.