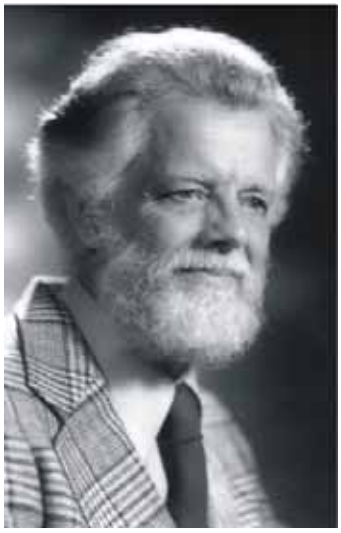


NACHRUF

Prof. Dr. Philip Steven Corbet
geb. 21. Mai 1929 in Kuala Lumpur, Malaysia
gest. 13. Februar 2008 in Truro, Cornwall, Großbritannien

Am 13. Februar 2008 verstarb in Truro, Cornwall (Südwest-England) im Alter von 78 Jahren völlig unerwartet der international geschätzte britische Entomologe Philip S. Corbet. Schon mit dem ersten Standardwerk zur Biologie und Ökologie der Libellen, welches er 1960 gemeinsam mit Cynthia Longfield und Norman Moore veröffentlichte, spätestens aber mit seinem Buch „A Biology of Dragonflies" im Jahr 1962, erlangte der damals 31 bzw. 33-jährige Philip Corbet den Ruf einer der bedeutendsten Odonatologen seiner Zeit zu sein. Neben vielen Veröffentlichungen, auch zu anderen Insektengruppen, folgte nach jahrzehntelangen Recherchen im Jahr 1999 seine aufwendigste Arbeit, das 829 Seiten umfangreiche Werk „Dragonflies: Behaviour and Ecology of Odonata". Dieses Buch gilt seit seinem Erscheinen vielen Entomologen bis heute als „Bibel der Odonatologie" und trug dem Autor in Anlehnung an seine Lieblingsart *Anax imperator* den wohlwollend gemeinten Titel „Imperator der Odonatologie" ein. Die Herausgabe seines Werkes in der japanischen Übersetzung, an der ihm sehr viel lag, konnte Phil Corbet noch erleben, die seines letzten Buches „Dragonflies", das er zusammen mit Stephen Brooks verfasste, leider nicht mehr. Es erschien im Juni 2008 bei Harper Collins, Kanada und beschreibt Vorkommen und Ökologie der Libellen in Großbritannien und Irland. Darin haben beide Autoren ihr Wissen und ihre Erfahrungen eingebracht, um die Relevanz britischer Libellenarten für den Naturschutz und als Bioindikatoren auch unter globalen Aspekten zu erläutern.

Neben seiner hohen wissenschaftlichen Kompetenz war Philip Corbet aber auch ein Schöngeist im klassischen Sinn. Er liebte die leichte Literatur und die Musik, letztere nicht nur als Hörereignis sondern auch praktizierend; so spielte er mit Begeisterung Klarinette.

Aber auch in der Philosophie war er sehr beschlagen. Die Neigung zu naturphilosophischen Themen findet sich in Zitatesammlungen zu seinen Werken

wieder, die er den Vorworten oftmals als eine Art Lebenserkenntnisse seiner beruflichen Passion, der Odonatologie, voranstellte. Beobachtungen in der Natur ließen ihn oft nachdenklich, aber auch euphorisch werden. So schrieb er einmal: *"I find it a stirring thought that each day of a dragonfly's life it must repeatedly choose how it will spend its precious time and energy."*
Und auch den Themen der Armutsbekämpfung und Bevölkerungsexplosion widmete er sich mehrfach, und zuletzt - möchte man vermuten - wieder verstärkt und vertiefend. Aktuelle, umfangreiche Gedanken hierzu finden sich hierzu auf der homepage der Cornwall Humanists Group, einer Sektion der British Humanist Association (Corbet 2007; siehe auch die Dokumentation seines Vortrages in dieser Ausgabe des IDF-Report). Man möchte spüren, dass eines der Silberhäupter ganz rechts am Tisch des Treffens im Safron in Truro ihm gehören möge.
Welchen Bekanntheitsgrad und populären Stellenwert die Person Philip S. Corbet auch in der britischen Öffentlichkeit einnahm, mögen die umfangreichen und ausführlichen Nachrufe in der seriösen englischen Presse wie z. B. dem INDEPENDENT am 28. Februar 2008 und dem DAILY TELEGRAPH am 6. März 2008 belegen.

Lebensweg

Philip Steven Corbet wurde am 21. Mai 1929 in Kuala Lumpur (Malaysia; bis 1957 britische Kronkolonie 'British Malaya') als ältestes von vier Kindern des Mikrobiologen und Entomologen Alexander Steven Corbet (1896 - 1948) und Irene Corbet (geborene Trewavas; Cornwall) geboren. Der Bruder Nigel verstarb bereits als Säugling an Meningitis, Roger als Fünfjähriger an Diphterie. - Die Liebe zur Natur und speziell zur Entomologie waren dem erstgeborenen Philip und seiner elf Jahre jüngeren Schwester Sarah, die 1940 in Neuseeland geboren wurde, bereits in die Wiege gelegt worden.

Die Eltern Irene Corbet (geb. Trewavas) und Alexander S. Corbet in Malaysia (1930)
Foto von Sarah A. Corbet zur Verfügung gestellt

Die Eltern waren 1927 nach ihrer Heirat nach Malaysia gegangen, wo der Vater Alexander Steven am Gummiforschungsinstitut in Kuala Lumpur eine Anstellung als Mikrobiologe antrat. Er war ein begeisterter und bekannter Lepidepterologe. Sein Standardwerk "Butterflies of the Malay Peninsula" von 1935, das er gemeinsam mit H. M. Pendlebury verfasste, wurde mittlerweile (1997) in der 5. Auflage herausgegeben.

Philip Corbet als Säugling mit Vatr Alexander in Kuala Lumpur. *Foto von S. Corbet zur Verfügung gestellt.*

Im Jahr 1931 waren die Eheleute Corbet mit Philip nach England zurück gegangen. Der Vater nahm eine Stelle am ICI Research Center an, einem Forschungsinstitut für Agrochemie in Jealotts Hill nahe Reading. Später wechselte er an das 'British Museum of Natural History', wo er in der lepidepterologischen Sammlung die Schmetterlinge aus Malaysia bearbeitete und später stellvertretender Kustos der entomologischen Sammlung wurde.

Während des zweiten Weltkriegs, als sich die Lage sowohl in Europa als auch in Südost-Asien zuspitzte, siedelte die mit Sarah schwangere Mutter 1940 gemeinsam mit ihrem Sohn Philip nach Neuseeland über. In Sorge um die entomologische Sammlung blieb der Vater in London zurück. Erst 1945 mit Ende des Pazifikkrieges kam die Familie wieder zusammen; aber bereits drei Jahre später verstarb der Vater 51-jährig an einem Herzinfarkt. Die Mutter Irene Corbet verstarb 87-jährig im Jahr 1988 in Cornwall, England.

Philip Corbet besuchte ab 1941 in Nelson, Neuseeland, das renommierte "Nelson Boys' College" und fünf Jahre später, nach Übersiedlung (1945) der Familie nach Großbritannien, die "Dauntsey's School" in Devizes, Grafschaft Wiltshire (Südwest England). Nach seinem College-Abschluss nahm er ein Biologie - Studium an der Elite - Universität von Reading („Top Ranking University") in der Grafschaft Berkshire auf. Er graduierte in Reading als Bachelor in Zoologie, Botanik und Geologie mit Auszeichnung und erhielt den „Colin Morley Prize for Zoology". Von dort aus ging er 1950 nach Cambridge an das „Gonville and Caius College" zu Prof. Sir Vincent Brian Wigglesworth, dem wohl renommiertesten Entomophysiologen seiner Zeit, bei dem er 1953 mit dem von ihm selbst gewählten Thema „The seasonal ecology of dragonflies" promovierte. Auf diese Arbeit wurde dann u.a. James Fisher, der damalige Mitherausgeber der 'New Naturalist Books', aufmerksam. Fisher konnte Philip Corbet dazu bewegen, seine Forschungsergebnisse gemeinsam mit Norman Moore und Cynthia Longfield zu veröffentlichen; 1960 wurde diese gemeinsame Arbeit unter dem Titel „Dragonflies" herausgegeben.

Im Jahr 1954, wenige Monate nach seiner Promotion, wurde er auf Empfehlung seines Doktorvaters und sicher auch seiner Tante Ethelwynn Trewavas, einer bekannten Ichthyologin, von der 'East African High Commission' vertraglich in

Philip Corbet als 24-jähriger Doktorand
Foto: von S. Corbet zur Verfügung gestellt.

das damals britische Protektorat Uganda verpflichtet, wo er zunächst bei der 'East African Freshwater Fisheries Research Organisation' am Viktoriasee in Jinja arbeitete. Dort untersuchte er den Nahrungsbedarf von Fischen (mit Ausnahme der Cichliden) in Viktoriasee und -Nil. Weiterhin forschte er sehr detailliert über den Anteil von Insekten am Nahrungsspektrum des Nilkrokodils und beschäftigte sich auch mit Studien zum Verhalten verschiedener aquatischer Insektengruppen. Drei Jahre später (1957) wechselte er an das 'East African Virus Research Institute' nach Entebbe (Uganda) zu Alexander John Haddow, einem herausragenden Mediziner und Entomologen, der gemeinsam mit anderen Wissenschaftlern einige Jahre zuvor die Entwicklungszyklen des Gelbfiebers erforscht hatte. Den Kontakt zu Haddow hat wieder sein Doktorvater Sir Vincent Wigglesworth hergestellt, der mit diesem über Jahre zusammengearbeitet hatte. Am Institut in Entebbe avancierte Corbet mit 27 Jahren sehr schnell zum Leiter der feldbiologischen Abteilung. Die Gruppe um Philip suchte nach den Übertragungsvektoren des damals noch weitgehend unbekannten O'nyong-nyong-Fiebers, einer nonletalen, mitunter sogar inapparenten Arbovirusinfektion, andererseits aber auch mit einem dem Denguefieber ähnlichen Krankheitsverlauf. Die Forschergruppe konnte sehr bald die Stechmücken *Anopheles gambiae* und *Anopheles funestus* als Träger des Virus feststellen. Noch während ihrer Untersuchungen kam es in Uganda und Kenia von 1959 bis 1962 zu einer O'nyong-nyong – Epedemie, von der bis 80% der Bevölkerung betroffen waren. Philip Corbets Hauptaugenmerk lag darin, große Proben von Stechmücken im Regenwald zu sammeln, um externe Weibchenmerkmale zu identifizieren, ohne für die Geschlechtsbestimmung unausgereifter Tiere in einem mühsamen Prozess die Ovariolen im Labor freilegen zu müssen. Er gelangte durch seine Forschungen zu einer Beobachtungsfertigkeit, die ihm ermöglichte Art, Geschlecht und Alter fliegender Stechmücken bestimmen zu können.

Philip Corbet hatte sich durch seine Forschungen in Uganda einen internationalen Ruf erworben, der das 'Canada Department of Agriculture Research' dazu bewog, ihn 1962 für das Entomologische Forschungsinstitut in Ottawa anzuwerben. Die politische Situation in Uganda - nach der Unabhängigkeitserklärung kam es zu blutigen Massakern zwischen verschiedenen Volksgruppen - erleichterte Corbet die Entscheidung diesem Ruf nach Kanada zu folgen, obwohl ihm

noch kurz vorher die Leitung des Instituts in Entebbe angedient worden war.
In Kanada widmete er sich zunächst – ähnlich wie zuvor in Uganda - der Fortpflanzungsökologie von Stechmücken. Bei seinen Untersuchungen entdeckte und beschrieb er das Phänomen der ‚fakultativen Autogenie', einer bis dahin unbekannten Fortpflanzungsstrategie bei arktischen Stechmücken. Wenn die Weibchen keine Möglichkeit zur Aufnahme von Wirbeltierblut finden (welches für die Oogenese i.d.R. unablässig ist, in der Arktis aber nicht immer zur Verfügung steht), so sind sie in der Lage wenigstens einige wenige Eier über die eigenen Energiereserven zu produzieren. Diese Strategie konnten Entomologen später auch in anderen Extremlebensräumen feststellen.

Philip Corbet im Alter von 33 Jahren (März 1963 während eines Symposiums an der Universität Purdue in Lafayette, USA) *Foto: Harold White*

Dass Corbets Aufgaben am Forschungsinstitut in Ottawa teilweise skurrile Ausmaße annahm, belegt der Auftragung, Montreal bis zur Weltausstellung 1967 (EXPO '67) insektenfrei zu bekommen. Insbesondere Stechmücken aus dem St. Lawrence Fluss wurden für die Stadt eine zunehmende Plage. Wie es Philip Corbet gelang dieser Plage Herr zu werden und welche Maßnahmen er dazu ergriff, ist leider nicht bekannt. Allerdings hatte er umfangreiche Erfahrungen in Uganda gesammelt, wie unter anderem auch seine Veröffentlichung von 1958 („Some effects of DDT on the fauna of the Victoria Nile"; s. auch Bibliographie) belegt. Vielleicht ist es diese Aufgabe gewesen, die ihn 1967 dazu bewog, die ihm angebotene Leitung des 'Canada Department of Agriculture Research Institute' (vormals 'Canadian Institute for Biological Control') in Belleville, Ontario, zu übernehmen. Die Direktorenstelle ermöglichte es ihm aber nicht mehr als „Feld- und Vollzeitentomologe" tätig zu sein, wie er es bisher gewohnt war. Vielmehr zeichnete seine Tätigkeit in dieser Stellung überwiegend ihm ungeliebte administrative Aufgaben aus.
Und dennoch wirkte Corbet auch als Leiter dieses Instituts sehr effektiv. Hauptaufgabe dieser landwirtschaftlichen Einrichtung war es, Methoden zur Bekämpfung von Plagen zu entwickeln und einzusetzen. Er suchte den Einsatz synthetischer und organischer Pestizide in der Landwirtschaft zu reduzieren, wenn möglich sogar ganz zu vermeiden. Möglicherweise war Philip Corbet zu diesem Zeitpunkt (1970) weltweit einer der wenigen, wenn nicht sogar der erste, der versuchte eine Landwirtschaftsbehörde auf einen biologischen Landbau einzuschwören. Seine Arbeit an diesem Institut führte dazu, dass er sich zunehmend mit dem Verhältnis des Menschen zur Natur zu beschäftigte. Er erkann-

te, dass das Bevölkerungswachstum einen zunehmenden Druck auf die natürlichen Ressourcen bewirkte und zu einer Destabilisierung von Ökosystemen führte. *(Bevölkerungswachstum und Nutzung der Ressourcen beschäftigten Philip Corbet ein Leben lang, wie zuletzt sein Vortrag vor der 'Cornwall Humanists' – Gesellschaft belegt. Die von ihm überarbeitete Version vom 21. November 2007 ist in diesem Heft abgedruckt.)*

Corbet unterstützte mit seinen Untersuchungen und Thesen diejenigen Politiker, deren Bestreben es war, Bevölkerungswachstum und die Verfügbarkeit von Nahrungsressourcen über eine ökologisch nachhaltige Landwirtschaft im Gleichgewicht zu halten. Dies kulminierte im Jahr 1971 in einem offenen Brief an den kanadischen Premierminister Pierre Trudeau, unterschrieben von weiteren 25 angesehenen kanadischen Biologen. Der begnadete Wissenschaftler brachte sich damals erstmalig auch als Naturphilosoph in die Politik ein.

Diese Einstellung schien vielen Verantwortlichen nicht adäquat zu sein für die Direktorenstelle einer landwirtschaftlichen Behörde (Ontario wurde zu der Zeit von der 'Progressiv-Konservativen Partei' regiert). Und bevor sich Corbet mit seiner Philosophie einer ökologisch orientierten Landwirtschaft in dieser wichtigen Behörde festsetzen konnte, wurde er weggelobt. Den Ruf auf eine Professorenstelle und als Leiter einer extra für ihn geschaffenen biologischen Abteilung innerhalb der allgemein wissenschaftlichen Fakultät an der damals eher kleinen und unbedeutenden Universität von Waterloo, Ontario, nahm er 1971 an. Er blieb dort, seiner wissenschaftlichen Fähigkeiten und Möglichkeiten beschnitten, nur drei Jahre und nutzte diese Zeit aber auch, um Kontakte zu Odonatologen vor allem in Amerika zu vertiefen.

Im Jahr 1974 nahm er dann einen Ruf als Professor im 'Centre for Environmental Sciences' an der Universität Canterbury und als Direktor der 'Lincoln Landwirtschaftsschule' in Canterbury, Neuseeland, an. Am Lincoln College setzte er sich für die Schaffung eines innovativen zweijährigen Magister-Studiengangs für Ressourcenmanagement ein, der den gut ausgebildeten Absolventen einflussreiche Positionen in Regierungs- und Landwirtschaftsorganisationen ermöglichen sollte. Jedoch veranlasste ihn die aus seiner Sicht ungenügend wissenschaftliche, aber zunehmend politische Position am College zum Rücktritt, um sich ab 1978 ganz seiner Lehrtätigkeit an der Universität von Canterbury zu widmen und wenig später den Lehrstuhl für Zoologie anzunehmen.

Sein bis dahin international erworbenes Ansehen und sein stetiges Engagement für eine biologische Landwirtschaft führten sehr bald dazu, dass er in verschiedene neuseeländische Gremien berufen wurde, so in den staatlichen Umweltrat, als beratendes Mitglied in den Regierungsrat für Kernkraftfragen, in die natio-

nale demographische Gesellschaft und schließlich als neuseeländisches Mitglied in die Exekutive des 'Club of Rome'.

Nicht nur seine Tätigleiten in Kanada und Neuseeland belegen, dass Philip Corbet ein politisch engagierter Mensch war. Auch später in Großbritannien sollte er sich für den Naturschutz politisch einsetzen.

Nach der Geburt der Tochter Katarina 1978 beschlossen die Eltern nach Europa zurückzukehren. Zwei Jahre später wurde ihm eine Commonwealth-Gastprofessur in der Abteilung für angewandte Biologie an der Universität von Cambridge angeboten, die er auch annahm. Mit diesem Ruf nach Cambridge kehrte er nach 25 Jahren nicht nur nach England zurück, sondern auch an die Universität, die er im Jahre 1954 als damals frischgebackener Doktor der Biologie Richtung Afrika verlassen hatte, und an der mittlerweile seine Schwester Sarah Corbet als Privatdozentin für Entomologie tätig war.

Im Jahr 1980 folgte er dem Ruf an die Universität von Dundee in Schottland auf den Lehrstuhl für Zoologie. Von 1983 bis 1986 war er dann geschäftsführender Direktor der biologischen Fakultät. In dieser Zeit arbeitete er auch im Vorstand des schottischen Naturschutzrats ('Nature Conservancy Council for Scotland'). Corbet emeritierte 1990, was aber nicht einen beruflichen Ruhestand bedeutete. Vielmehr wurde er von der Universität Edinburgh zum Honorarprofessor für Entomologie ernannt. Er blieb bis 1996 an der Universität von Edinburgh, ehe er sich endgültig in den Ruhestand begab und in das klimatisch angenehmere Cornwell übersiedelte, von wo die Familie seiner Mutter stammte, und wohin sich bereits seine Schwester Sarah nach ihrer Pensionierung zurückgezogen hatte. Dort kaufte er sich in Crean eine zum Wohnhaus umgebaute alte Wassermühle („Crean Mill") – natürlich mit einem Bach und einem Libellenteich. Der Rückzug in den „ewigen Frühling" an der Südwest-Spitze Englands bewirkte einen erneuten Schaffensschub. Hier entstanden in den letzten elf Jahren 40 seiner rund 200 odonatologischen Veröffentlichungen. Insgesamt hat er im Laufe seines Lebens über 300 Arbeiten zu Fischen, Krokodilen sowie zu Dipteren, Libellen und anderen aquatischen Insekten, Epidemie-Management, Bevölkerungsstatistiken, Ressourcen-Management und arktischem Mikroklima in wissenschaftlichen Zeitschriften veröffentlicht.

Aber Philip Corbet war in den 80er und 90er Jahren des 20. Jahrhunderts als Wissenschaftler nicht nur an universitären Einrichtungen tätig. Sein außerordentlicher wissenschaftlicher Ruf bewirkte, dass er auch als Berater bei FAO (Food and Agriculture Organisation), WHO (World Health Organisation) und in verschiedenen Gremien der EU sehr gefragt war. Und selbst noch im Jahr 2003 reiste er als Experte für medizinische Entomologie im Rahmen eines UNESCO-Programms nach Myanmar an das Department of Medical Research in Yangon, um bei dem

Aufbau dieses Instituts und Fragen der biologischen Kontrolltechniken beratend tätig zu sein.
Neben seinen verschiedenen Tätigkeiten in wissenschaftlichen Vereinigungen setzte er sich, zeitweise in Honorarposition als Geschäftsführer, bis zuletzt intensiv im Rat des 'Cornwall Wildlife Trust' ein, in dem schon seine Schwester Sarah seit ihrer Pensionierung tätig ist.
Philip Corbet war dreimal verheiratet, alle drei Ehen wurden geschieden. Tochter Katarina bekam er mit seiner zweiten Ehefrau. Katarina studierte der Tradition der Familie folgend ein naturwissenschaftliches Fach (Geographie), ehe sie ihren Faible zur Kunst verwirklichte. Sie studiert derzeit an der Kunsthochschule Kassel (Deutschland).

Philip Corbet at St. Loy's Cove, Penzance, *Foto: S. Corbet*

Philip Corbet erlitt bereits 2001 einen leichten Infarkt, von dem er sich aber vollständig erholen konnte. Ein erneuter, diesmal schwerer Herzinfarkt, den er in St. Buryan beim Einkaufen erlitt, führte wenige Stunden später im Krankenhaus von Truro zu seinem schnellen Tod. Der Leichnam Philip Steven Corbets wurde am 25. Februar 2008 im Krematorium von Truro eingeäschert. Die Trauerfeier fand am selben Tag in der St. Uny's Kirche in Lelant, nahe St. Ives, Cornwall, statt.

Auszeichnungen und ehrenamtliches Engagement

Zweifelsohne sind als höchste Auszeichnungen die Berufungen in verschiedene beratende Gremien Neuseelands, der EU und der UNO zu bewerten. Diese Tätigkeiten sind auch Ausdruck einer internationalen Wertschätzung des Wissenschaftlers und Menschen Philip Corbet.
Weitere für ihn sehr wichtige Auszeichnungen waren die Verleihungen der Doktorwürden durch die Universitäten von Reading (1962), Cambridge (1976), Edinburgh (2003) und Dundee (2005).

Bereits während seiner Studienzeit an der Universität von Reading erhielt er mit dem „Colin Morley Prize for Zoology" seine erste Auszeichnung (s.o.).

Philip Corbet ehrenamtliches Engagement vor allem für den Naturschutz findet seinen Anfang bereits sehr früh. Kurz nach seiner Ankunft in Kanada trat er 1962 der 'Entomological Society of America' (ESA) bei, wenig später der 'Entomological Society of Canada', in die er 1977 als ständiges wissenschaftliches Mitglied berufen wurde. Zuvor war er von 1971 bis 1972 deren Präsident. 1974 erhielt er die Goldene Ehrenmedaille der ' Entomological Society of Canada' für hervorragende Verdienste.

Im Jahr 1967 wurde Corbet ebenfalls als ständiges wissenschaftliches Mitglied in das kanadische 'Institute of Biology' aufgenommen, eine Auszeichnung, die mit ehrenamtlichen Tätigkeiten verbunden ist.

Bereits 1981, kurz nach seiner Ankunft in Schottland, wurde er in den Wissenschaftsrat des 'Scottish Wildlife Trust' gewählt, dessen Vorsitz er wenig später übernahm.

Im Jahr 1983 stand er als erster Präsident der neu gegründeten 'British Dragonfly Society' (BDS) voran. Die Gründung einer solchen nationalen Gesellschaft hatte Philip Corbet mit initiiert.

Seine Arbeit für den 'Cornwall Wildlife Trust', dem er seit 1996 angehörte, war zuletzt gekennzeichnet durch seine Position als Vorsitzender des Komitees für die Entwicklung von Naturschutzstrategien.

Philip Corbet war Ehrenmitglied in verschiedenen odonatologischen Gesellschaften, so in der 'British Dragonfly Society' (seit 1991), der 'Société Française d'Odonatologie' (seit 1997) und der 'Dragonfly Society of the Americas' (seit 2002).

Philip unterstützte Zeit seines Lebens jüngere Kollegen und versuchte auch das Interesse von Jugendlichen für Libellen zu fördern. Die BDS hat daher gemeinsam mit Philip Corbet den 'Philip Corbet Award Fund' ins Leben gerufen. Aus diesem Fond werden odonatologische Arbeiten junger Odonatologen (Förderalter maximal 25 Jahre) mit bis zu 320,00 jährlich unterstützt.

Lange Jahre war Corbet Mitglied im Vorstand der Societas Internationalis Odonatologica. Zwischen 1989 und 1991 war Philip President-Elect, jedoch führten erste Zerwürfnisse innerhalb des S.I.O.-Vorstandes dazu, dass er sich 1991 nicht mehr der Wahl zum Präsidenten der S.I.O. stellte.

Von 2001 bis 2003 stand er als Präsident der 'Worldwide Dragonfly Association' (WDA) voran, an deren Gründung 1997 er wesentlichen Anteil hatte.

Philip Corbet war seit 1985 aber auch Mitglied der 'Royal Society of Tropical Medicine and Hygiene', wenn auch die Gesellschaft einen überwiegend medizinischen Arbeitsschwerpunkt verfolgt.

Im Jahr 1987 wurde er auf Empfehlung in die Royal Society of Edinburgh (RSE) aufgenommen. Die Gesellschaft setzt sich zusammen aus verdienten Persönlichkeiten aus Wissenschaften, Künsten, sozialen Berufen, Industrie und Handel. Die RSE fördert insbesondere nationale und internationale Forschungsprojekte. Ein weiterer Schwerpunkt liegt in der Förderung von Schülern und Studenten sowie junger Forscher. Sein Buch „Dragonflies: Behaviour and Ecology of Odonata" war letztlich auch der Grund, dass ihm von der Royal Society of Edinburgh 2002 die 'Neill Medaille' für hervorragende naturwissenschaftliche Veröffentlichungen verliehen wurde.

Es ist nur wenigen bekannt, dass Phil Corbet 1991 auch als Mitglied in die 'Royal Society of Arts' aufgenommen wurde. Oberstes Ziel dieser Gesellschaft ist es „über eine umfangreiche und gezielte Aufklärung die Hindernisse für einen sozialen Fortschritt zu überwinden". Die Gesellschaft unterstützt, initiiert und finanziert insbesondere Forschungsprojekte in allen Wissenschaftsrichtungen.

Philip Corbet zu Ehren wurden zwei Libellenarten und eine Unterart benannt:

Microgomphus schoutedeni corbeti Pinhey, 1961

Die neue Unterart wurde von Pinhey nach Dr. P. Corbet benannt, da dieser selbst die Typen nahe eines Wasserfalls am bewaldeten Ufer des Sezibwa Rivers auf halber Strecke zwischen Jinja und Kampala (Uganda) gesammelt hatte.

Agriocnemis corbeti Kumar & Prasad, 1978

Die Coenagrionide wurde erstmals von Arun Kumar und Mahabir Prasad am 10. März 1976 in Badripur im Dehra Dun Tal, Indien, gefangen und 1978 erstbeschrieben. Beide Autoren widmeten die Art Philip Corbet (damals Neuseeland) aus Dank für das Interesse an der Biologie der Libellen, welches er bei ihnen geweckt hatte, und seine stetige Unterstützung bei ihren Studien.

Gynacantha corbeti Lempert, 1999

Diese Aeshnide wurde von Jochen Lempert erstmals am 28. August 1993 am Gombak River in West-Malaysia gefangen. Lempert beschrieb die Art dann erst 1999 und benannte sie zu Ehren Philip Corbets zu dessen 70. Geburtstag.

Der Odonatologe

Das Interesse und die Liebe zur Natur wurden bei Philip Corbet und seiner Schwester Sarah bereits in ihrer frühen Kindheit überwiegend vom Vater geweckt. Und wie zuvor der Vater sollten beide später ebenfalls in der angewandten Entomologie als Ökologen arbeiten, Sarah als anerkannte Hymenopterologin im Bereich der Bedeutung der Bestäubungsökologie für die Landwirtschaft, und Philip zunächst in der medizinischen Entomologie, später in der epidemiologischen Entomologie ebenfalls in der Landwirtschaft. Aber bereits sein Großvater betrieb die Entomologie "als Hobby", und seine Tante mütterlicherseits, Ethelwynn Trewavas, war als renommierte Ichthyologin am 'British Museum of Natural History' tätig. Vieles deutet also darauf hin, dass ihm die biologischen Wissenschaften von vornherein "im Blut lagen".

Philip Corbet hat sich während seiner beruflichen Laufbahn überwiegend in der angewandten Entomologie Meriten verdient, die Odonatologie blieb ihm dabei aber immer eine geliebte und intensiv betriebene Beschäftigung, die er - wann immer möglich - in seine institutionellen Aufgaben mit einband. Seine erste Veröffentlichung überhaupt hatte Odonaten zum Thema. Bereits als 17-Jähriger beschäftigte er sich mit dem Einsatz von Libellen zur biologischen Kontrolle.

Seine ersten intensiven Feldstudien über Libellen begann er mit Übersiedlung der Familie nach England Ende der 1940er Jahre. Seine zweite Veröffentlichung war eine faunistische Arbeit zur lokalen Libellenfauna. Als Corbet anfing, die Lebenszyklen von britischen Libellen zu studieren, war über die Biologie dieser Gruppe sehr wenig bekannt. Mit Norman Moore war er der Erste, der Beobachtungen im Feld mit gut gestalteten Versuchen im Labor verband und analysierte. In seiner Dissertation zeigte er, dass britische Libellen in zwei Gruppen eingeteilt werden können. Die eine Gruppe beendet ihr Larvenwachstum im Herbst und schlüpft dann fast synchron im Frühjahr. Die andere überwintert als Larve in verschiedenen Stufen des Wachstums und schlüpft im Frühjahr bis Sommer meist über viele Wochen verteilt. Dieses Schema wird heute noch, wenn auch in detaillierterer Form verwendet.

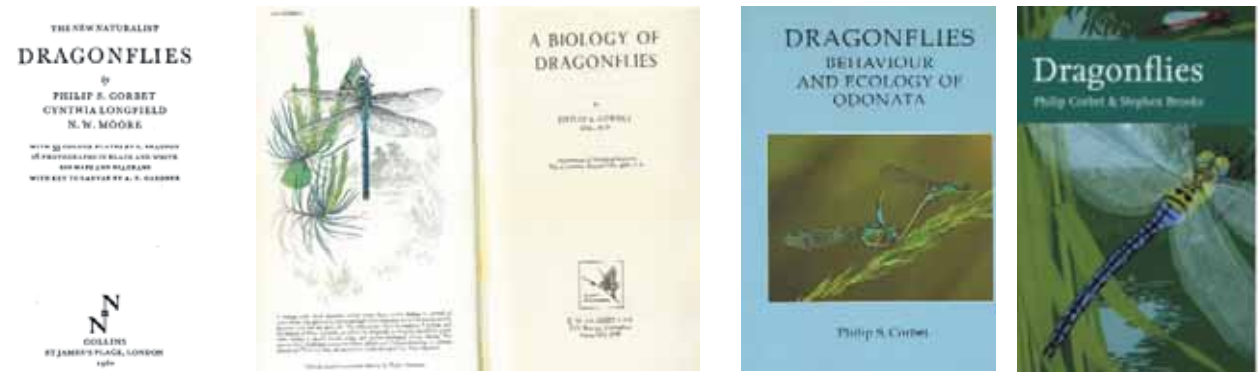
Corbet war ein geduldiger und geschickter Feldentomologe. Um den Schlupf von Libellen beobachten zu können, suchte er die Gewässer bereits sehr früh und in totaler Dunkelheit auf. Er war sicherlich auch deswegen der erste, der den Massenschlupf bei *Anax imperator* beschrieb. Diese Beschreibungen waren mitunter zwar sehr blumig, fast lyrisch, aber doch sehr genau und detailliert (*„...the branches and trunks of trees thickly festooned with motionless dragonflies, each with its glistening wings folded over its back. An hour before sunrise, they simultaneously began to rustle and vibrate their wings with an eerie whirring sound; and, still before the sun rose, the air seemed filled with ghost-like dragonflies, rising up into the mist and flying away out of sight...")*.

Philip Corbet war überwiegend Ökologe. Der Schwerpunkt seines odonatologischen Interesses lag in Untersuchungen zur Biologie und zum Verhalten von Libellen, wobei es sein Bestreben war, komplexe Zusammenhänge zu erforschen und zu verstehen. Corbet war kein Taxonom. Die Systematik interessierte ihn nur dann, wenn Arttrennungen nachweisbar über Verhaltensänderungen aufgrund ökologischer Adaptionen erfolgten. Nick Donnelly schreibt in seinem Nachruf sehr treffend: „*Corbet's interests seemed to span the entire world of Odonata - behavior, life history, etc. - everything but taxonomy. Such was his charm and enthusiasm that you never missed that he ignored this aspect of odonates throughout his entire life.*"

Philip Corbet war der erste Odonatologe, der komplexe Untersuchungen zur Entwicklung von Libellenlarven in Phytotelmata anstieß. Bereits in Afrika hatte er erste Beobachtungen zu Libelluliden gesammelt, die ihre Eier in pflanzlichen Wasserspeichern ablegten. Zwar hatten zuvor schon Leicaster (1903), Calvert (1910), Varga (1928) und Lieftinck (1954) über Odonaten in Phytotelmen berichtet, aber Corbet untersuchte als erster 1958 gezielt das Vorkommen von *Hadrothemis camarensis* in Bambus-Röhren in Uganda und später auch von *Hadrothemis scabrifrons* in wassergefüllten Baumhöhlen. Seine Veröffentlichungen zu dieser bisher unbeachteten Fortpflanzungsstrategie inspirierte ab Ende der 80er Jahre die Entomologin Ola Fincke zu Forschungsprojekten vor allem in Mittelamerika, speziell an Vertretern der Mesostigmatidae.

Neben den drei bedeutenden odonatologischen Standardwerken „Dragonflies" (1960; gemeinsam mit Cynthia Longfield und Norman W. Moore), „A Biology of Dragonflies" (1962) und „Dragonflies: Behaviour and Ecology of Odonata" (1999) sowie zahlreichen weiteren Veröffentlichungen zeichnete Philip Corbet auch das Bestreben aus, Odonatologen zusammenzuführen. So war er (Co-)Initiator und oft auch Gründungsmitglied zahlreicher Vereinigungen wie der 'British Dragonfly Society' (BDS) sowie zuletzt der 'Worldwide Dragonfly Association' (WDA) im Jahr 1997 in Maribor, Slowenien, deren konstitutionelle Sitzung im

September 1997 in Purley (England) stattfand. Nach Spaltung der S.I.O. war Corbet der stimmengewichtigste Befürworter für die Gründung einer neuen internationalen Odonatologen-Vereinigung. Möglicherweise hätte die WDA ohne Philip Corbet niemals aus der Taufe gehoben werden können. Von der ersten Ausgabe des Journals der WDA ("Pantala – The International Journal of Odonatology" ab 2002 "IJO - International Journal of Odonatology") bis zuletzt gehörte er dem wissenschaftlichen Beirat an. Philip S. Corbet war von Beginn an der "Archivist" der WDA.
Er "formte" durchaus den Ablauf odonatologischer Symposien. So wurden die "Current Topics" ein fester Bestandteil eines jeden Kongresses, an dem er teilnahm. Zu Beginn einer Plenarsitzung wurden Themen vorgegeben, zu denen jeder Teilnehmer seine persönlichen Beobachtungen und Erfahrungen einbringen konnte. Diesen "Current Topics" wurde ein breites Spektrum eingeräumt, und die Diskussionen waren meist über mehrere Stunden angesetzt.



Die vier wichtigen odonatologischen Werke von Philip Corbet: "Dragonflies" (1960; gemeinsam mit C.Longfield u. N. Moore), "A Biology of Dragonflies" (1962), "Dragonflies: Behaviour and Ecology of Odonata" (1999) und das gemeinsam mit Stephen Brooks verfasste Buch "Dragonflies"

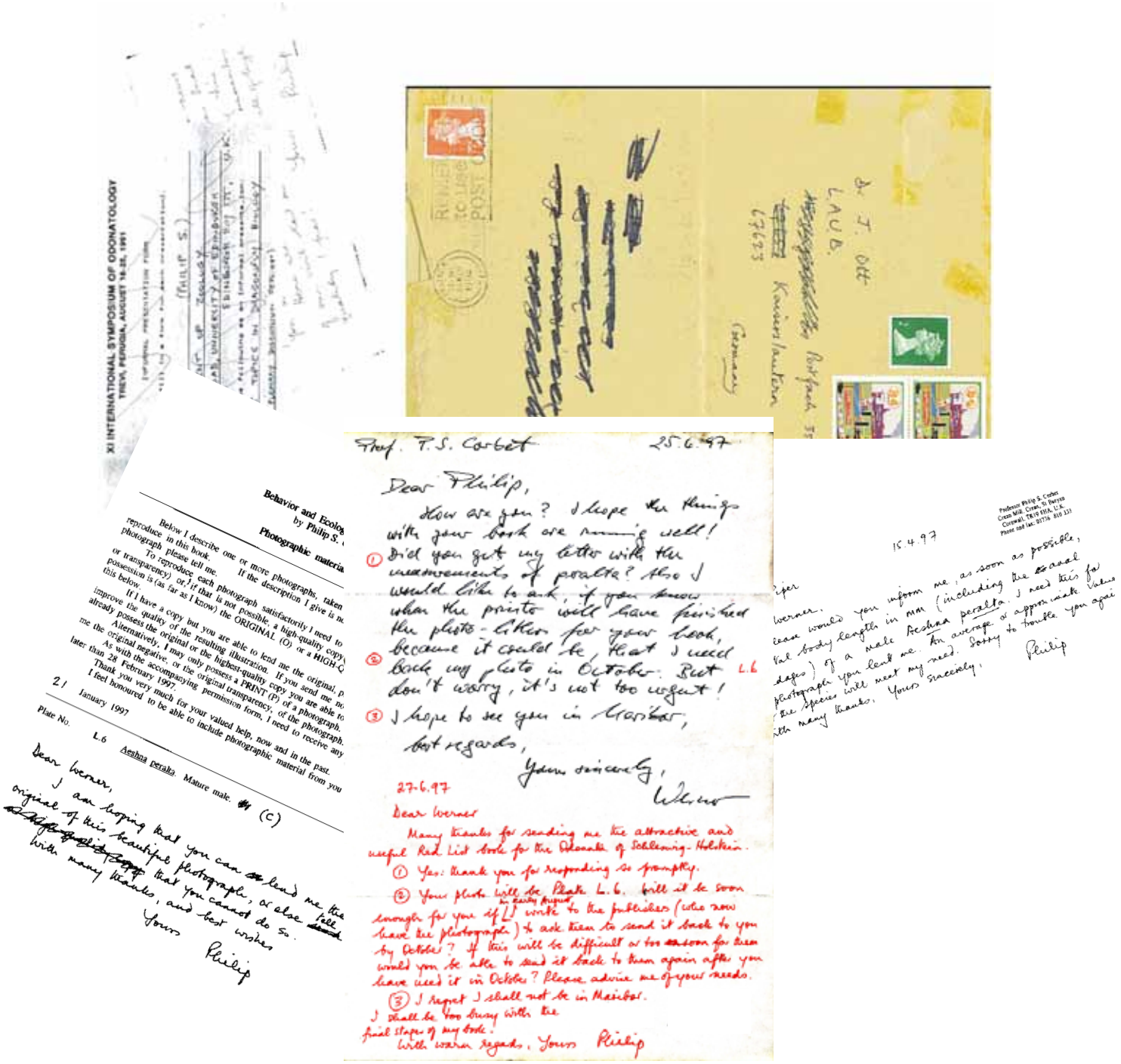
Die gedruckte Wiedergabe dieser Erörterungen hielt sich – und das war eine der Besonderheiten – an das gesprochene Wort. Vor dem Symposium in Maribor 1997 erfolgte ein abrupter Bruch, nachdem sich Philip Corbet aus der S.I.O. zurückgezogen hatte, wobei erste Anzeichen einer Loslösung vom Führungsgremium der S.I.O. bereits 1991 während des Symposiums in Trevi (Italien) feststellbar waren. In der WDA initiierte er dann eine ähnliche Reihe als "plenary seminar", wobei er die Diskussionsführung öfter in die Hände Themen kompetenter Kollegen legte. Die über Jahre gesammelten 'current topics' bildeten eine wichtige Grundlage für seine beiden letzten Werke.
Philip Corbet war Mitglied in zahlreichen odonatologischen Vereinigungen, so seit 1991 – spätestens aber seit Anfang 1992 [dies konnte nicht mehr exakt recherchiert werden] auch in der Gesellschaft deutschsprachiger Odonatologen (GdO). Dreimal nahm er an den Jahrestagungen der GdO teil: erstmals 1993 auf

Initiative und Einladung durch Jürgen Ott in Kaiserslautern mit einem Vortrag zum Thema 'Libellen als Bioindikatoren' ("Are Odonata usefull as bioindicators?"), ein weiteres Mal ein Jahr später in Höxter mit einem Workshop ("Some aspects of recent odonatological survey and perspectives of further research and means of species-protection") und schließlich 2002 in Worms ("Recent developments in odonatology").
In Anbetracht seiner früheren Tätigkeiten als angewandter Entomologe und seine erste Veröffentlichung als 17-Jähriger (s.o.) brachte er Libellen verhältnismäßig spät (1990) als Bioindikatoren und im Rahmen biologischer Kontrollen gezielt ins Gespräch. So stellte er 1999 fest: *"...that Odonata can indeed play a useful role as indicators of general habitat quality..."*. Ein Jahr später (2000) veröffentlichte er eine Arbeit mit dem Titel 'Use of odonate larvae for biocontrol of insect pests', in der er sich über die Möglichkeiten des Einsatzes von Libellenlarven bei der Kontrolle von Mückenplagen in tropischen Regionen auslässt. Von 1988 bis 1990 hatte er gemeinsam mit A. Sebastian, M.M. Sein und M.M. Thu vielversprechende Versuche in Burma begonnen, und auch während seiner Reise 2003 nach Burma (Myanmar) für die UNESCO (s.o.) galt diese Möglichkeit der biologischen Kontrolle seinem Hauptaugenmerk.

Insbesondere sein Buch "A biology of dragonflies" hat in den 80er und 90er Jahren des letzten Jahrhunderts eine wachsende Anzahl junger Studenten und Biologen dazu motiviert sich mit odonatologischen Themen zu beschäftigen. Insbesondere Verhaltensstudien an Libellen erfuhren in dieser Zeit eine regelrechte Studienflut. Viele Diplom- und Doktorarbeiten in Deutschland, aber auch weltweit, wären ohne Philip S. Corbet und sein Standardwerk nie geschrieben worden. An vielen dieser Arbeiten war er zumindest indirekt, oft aber auch direkt beteiligt, wie die Erwähnung des Namen 'Corbet' in vielen Danksagungen belegt. Sein letztes Standardwerk „Dragonflies: Behaviour and Ecology of Odonata" steht dem in Nichts nach, wie die mittlerweile 2. Auflage in nur acht Jahren zeigt.

Der Mensch Philip Corbet

Viele Odonatologen brachten Philip Corbet bei einem ersten persönlichen Kennenlernen eine oft ängstliche Ehrfurcht entgegen, zu groß war die Aura um ihn, die ihm seine wissenschaftliche Tätigkeit, insbesondere aber sein Buch "A biology of dragonflies" verliehen hatte. Und genau diese Ehrfurcht lehnte er ab. Er verlangte Respekt. Den gleichen Respekt, den er unvoreingenommen jedem anderen entgegenbrachte.



Briefe von Philip Corbet besaßen eine gewisse Originalität; oft nutzte er kleine Zettel, und Briefe wurden oft auf demselben Anschreiben beantwortet, ebenso wie Umschläge mehrfach verwendet wurden

Philip S. Corbet war auf seine Art eine außergewöhnliche und facettenreiche Person - und doch keine schillernde Persönlichkeit. Er war ein ruhiger, überlegter und überlegener Mensch, der niemals aufdringlich wirkte, aber durchaus nicht introvertiert war, vielmehr sehr nahbar. Und genau dieser Wesenszug ließ ihn beim Umgang mit anderen immer so “groß” erscheinen.

Man hatte oft das Gefühl, dass er gezielt auf junge Kollegen zuging und sich derer eher annahm, als den älteren "Platzhirschen". Philip Corbet besaß eine natürliche Abneigung gegen Überheblichkeit, Besserwisserei und Arroganz. Im Gegensatz zu den meisten anderen aber reagierte er darauf sehr feinfühlig und zurückhaltend ohne seinem Gegenüber vor den Kopf zu stoßen. In der Folge mied er Kontakte zu Menschen, denen er aufgrund solcher Eigenschaften abgeneigt war. Er besaß einen ausgesprochenen, geradlinigen Gerechtigkeitssinn, der es ihm meist nicht erlaubte von ihm empfundene Ungerechtigkeiten auf diplomatischem Weg entgegenzutreten. Diese ihm eigenen Wesenszüge waren letztlich ausschlaggebend dafür, dass er der S.I.O. den Rücken zukehrte. Um die vielen S.I.O.-Mitglieder, die ihn nicht nur schätzten, sondern mit denen er z.T. auch befreundet war, nicht zu enttäuschen, war er eine der treibenden Kräfte für die Gründung einer neuen und „gerechten" Odonatologen-Vereinigung (was allerdings auch dazu führte, dass viele Odonatologen nun zwischen den Stühlen oder auf zwei Stühlen saßen).

Er scheute Konflikte, ging diesen aus dem Weg und wendete sich ihnen oft ab, was sicherlich auch seinen Lebensweg kennzeichnete, und unter anderem oft, allerdings nicht ausschließlich, ein Auslöser für seine häufigen Loslösungen von Lebenspartnern (darunter drei Ehen) und Arbeitsverhältnissen war.

Seine Reisefreude entsprang sicherlich einer ständigen Suche nach neuen Aufgaben und Herausforderungen, wobei er eine einmal angenommene Aufgabe aufgrund seiner Zielstrebigkeit nie ungelöst zurückließ.

Philip Corbet liebte Cornwall, die Heimat seiner Mutter, fühlte sich aber eher als Schotte (die Familie väterlicherseits stammte aus Schottland). Er war ein Brite alter Schule, weltoffen und äußerst gebildet. Philip S. Corbet besaß einen unvergleichlichen Charme – und er war ein Charmeur, dem manche Frau nicht widerstehen konnte. Amerikanische Kollegen nannten ihn "gentleman Philip" und aufgrund seiner gepflegten sowie genauen Sprache wohlwollend auch "wordsmith Philip". Er besaß das unvergleichliche Talent, nüchterne wissenschaftliche Fakten und Analysen spannend wiederzugeben und seine Leser mit vermeintlich „trockenen" Themen fesseln zu können. Es war ein Genuss ihm zuzuhören, wobei persönliche Gespräche allerdings schnell zu Monologen des Gesprächspartners genierten. Denn Philip war immer wissbegierig und stellte ständig Fragen. Und er war ein ausgezeichneter Zuhörer. Philip Corbet förderte fast bedingungslos junge Odonatologen, wovon auch viele junge deutsche Kollegen profitieren durften. Die Korrespondenz mit ihm war grundsätzlich lehrreich und ein Erlebnis, gerade auch deswegen, weil zu Zeiten der „snail mails" seinen Briefen eine gewisse Originalität nicht abgesprochen werden konnte. Es war eine Gepflogenheit, dass Philip Umschläge - und selten sogar Briefpapier – mehrfach

verwendete. So konnte man mitunter nachvollziehen, mit welchen Personen er zuvor Briefkontakt hatte. Kurios wurde es dann, wenn als Briefpapier ein alter Einkaufzettel herhalten musste. Das war kein Ausdruck der Missachtung, im Gegenteil: diese Originalitäten erlaubte er sich nur bei ihm vertrauten Personen. Und es war auch kein Ausdruck von übertriebener Sparsamkeit (obwohl er ein materiell sehr sparsamer Mensch war), vielmehr tat er dies im Bewusstsein der Schonung natürlicher Ressourcen, für deren Schutz und maßvolle Nutzung er sich Zeit seines Lebens eingesetzt hatte (s.o.).
Philip Corbet war aber durchaus auch ein Genussmensch. So liebte er einen guten Tropfen, vornehmlich Whisky. Einem Freund gegenüber erwähnte er einmal, dass er gerne abends im Garten bei Musik zur Entspannung noch ein Glas Glenfiddich zu sich nehmen würde.

Mit Philip Steven Corbet hat uns nicht nur ein großer Naturwissenschaftler, sondern auch ein großartiger Mensch auf immer verlassen.

Danksagung

Wir danken John C. Abbott, Thomas W. Donnelly, Reinhard Jödicke, Ulrike Krüner, Jürgen Ott, Werner Piper, Klaus Reinhardt und Harold White für die Bereitstellung von Informationen und Fotos. Unser ganz spezieller Dank gilt Sarah A. Corbet, die uns nicht nur Fotos und Informationen aus dem Leben ihres Bruders zur Verfügung stellte, sondern auch kritisch auf Fehler im Manuskript hinwies.

Odonatologische Bibliographie von Philip Corbet

Abro, A.; Corbet, P.S. (1991): Obituary: Audfinn Tjonneland. Odonatologica 20: 479-481.

Agüero-Pelegrin, M.; Ferreras-Romero, M.; Corbet, P.S. (1999): The life cycle of Lestes viridis (Odonata: Lestidae) in two seasonal streams of the Sierra Morena Mountains (southern Spain). Aquat. Insects 21: 187-196.

Armstrong, J.S.; Corbet, P.S. (1980): Conversations about New Zealand dragonflies. Societas Internationalis Odonatologica, Rapid Communications 2: XIV, 73 pp.

Askew, R.R.; Prosser, R.; Corbet, P.S. (1998): Odonata of the Cayman Islands: a review. Bulletin of American Odonatology 5(2): 27-32.

Bick, G.H.; Corbet, P.S. (1969): A translation information service for odonatologists. Tombo 12: 35-39.

Butler, T.; Peterson, J.E.; Corbet, P.S. (1975): An exeptionally early and informative arrival of adult Anax junius in Ontario (Odonata, Aeshnidae). Can. Entomol. 107: 1253-1254.

Chowdhury, S.H.; Corbet, P.S. (1987): New external morphological characters for distinguishing larvae of Enallagma cyathigerum (Charpentier) and Ischnura elegans (Vander Linden) (Zygoptera: Coenagrionidae). Odonatologica 16: 375-378.

Chowdhury, S.H.; Corbet, P.S. (1988): Feeding rate of larvae of Enallagma cyathigerum (Charpentier) in the presence of conspecifics and predators (Zygoptera: Coenagrionidae). Odonatologica 17: 115-119.

Chowdhury, S.H.; Corbet, P.S. (1989): Feeding-related behaviour in larvae of Enallagma cyathigerum (Charpentier) (Zygoptera: Coenagrionidae). Odonatologica 18: 285-288.

Chowdhury, S.H.; Corbet, P.S.; Harvey, I.F. (1989): Feeding and prey selection by larvae of Enallagma cyathigerum (Charpentier) in relation to size and density of prey (Zygoptera: Coenagrionidae). Odonatologica 18: 1-11.

Copeland, R.S.; Okeka, W.; Corbet, P.S. (1996): Treeholes as larval habitat of the damselfly Hadrothemis camarensis (Odonata: Libellulidae) in Kakamega Forest, Kenya. Aquat. insects 18: 129-147.

Corbet, P.S (1997): Emperor Dragonfly Anax Imperator, Leach. In: Brooks, S. (Ed.), "Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland". British Wildlife Publishing, Hook, UK: 113-114.

Corbet, P.S. (1949): County records of Odonata. Entomologist 82: 239.

Corbet, P.S. (1950): Missing caudal lamellae in Odonata naiads. Entomologist 83: 18.

Corbet, P.S. (1950): Observations on the development and ecology of Sympetrum striolatum (Charpentier) (Odonata). B. Sc. Dissertation, University of Reading, UK. 202 pp..

Corbet, P.S. (1950): Rapid colonization of ponds by Odonata. Entomologist 83: 87.

Corbet, P.S. (1950): Some observations on Ceriagron tenellum (Villers) (Odonata). Entomologist 83: 27.

Corbet, P.S. (1950): The dragonflies of Berkshire. Reading Naturalist 1: 65-67.

Corbet, P.S. (1951): The development of the labium of Sympetrum striolatum (Charp.) (Odon., Libellulidae). Entomol. monthly mag. 87: 289-296.

Corbet, P.S. (1951): The emergence and sex ratio of Anax imperator Leach (Odonata, Aeshnidae). Entomol. monthly mag. 87: 176-179.

Corbet, P.S. (1952): An adult population study of Pyrrhosoma nymphula (Sulzer) (Odonata: Coenagrionidae). J. Anim. Ecol. 21: 206-222.

Corbet, P.S. (1953): A terminology for the labium of larval Odonata. Entomologist 86: 191-196.

Corbet, P.S. (1953): The seasonal ecology of dragonflies. Ph.D. thesis. University of Cambridge. 173 pp.

Corbet, P.S. (1954): Account of quantitative methods used in the study of dragonfly ecology. Proc. Roy. entomol. Soc. Lond. C 18: 54.

Corbet, P.S. (1954): Seasonal regulation of British dragonflies. Nature 174: 655 (Erratum 777).

Corbet, P.S. (1955): A critical response to changing length of day in an insect. Nature 175: 338-339.

Corbet, P.S. (1955): The immature stages of the Emporor dragonfly, Anax imperator Leach (Odonata: Aeshnidae). Entomol. Gaz. 6: 189-197.

Corbet, P.S. (1955): The larval stages of Coenagrion mercuriale (Charp.) (Odonata: Coenagrionidae). Proc. Roy. entomol. soc. Lond. A 30 (7-9): 115-126.

Corbet, P.S. (1956): Environmental factors influencing the induction and termination of diapause in the Emperor dragonfly, Anax imperator Leach (Odonata: Aeshnidae). J. exp. biol. 33: 1-14.

Corbet, P.S. (1956): Larvae of East African Odonata. Introduction and 1.. Entomologist 89: 97-100.

Corbet, P.S. (1956): Larvae of East African Odonata. 2-3. Entomologist 89: 148-151.

Corbet, P.S. (1956): Larvae of East African Odonata. 4-5. Entomologist 89: 216-219.

Corbet, P.S. (1956): The dragonfly larva, from R.E. Snodgras. Smithonian misc. Coll. 123. 38 pp, 1954. J. Roy. microsc. Soc. ser. 3, 76(4): 182.

Corbet, P.S. (1956): The influence of temperature on diapause development in the dragonfly Lestes sponsa (Hansemann) (Odonata: Lestidae. Proc. Roy. entomol. Soc. Lond. (A) 31: 45-48.

Corbet, P.S. (1956): The life-history of Lestes sponsa (Hansemann) and Sympetrum striolatum (Charpentier) (Odonata). Tijdschr. Entomol. 99: 217-229.

Corbet, P.S. (1957): Larvae of East African Odonata. 6-8. Entomologist 90: 28-34.

Corbet, P.S. (1957): Larvae of East African Odonata. 9-11. Entomologist 90: 111-119.

Corbet, P.S. (1957): Larvae of East African Odonata. 12-14. Entomologist 90: 143-147.

Corbet, P.S. (1957): The life histories of two summer species of dragonfly (Odonata: Coenagrionidae). Proc. zool. Soc. Lond. 128: 403-418.

Corbet, P.S. (1957): The life-histories of two spring species of dragonfly (Odonata: Zygoptera). Entomol. Gaz. 8: 79-89.

Corbet, P.S. (1957): The life-history of the Emperor dragonfly Anax imperator Leach (Odonata: Aeshnidae). J. Anim. Ecol. 26: 1-69.

Corbet, P.S. (1958): Some effects of DDT on the fauna of the Victoria Nile. Rev. zool. bot. Afr. 57(1/2): 73-95.

Corbet, P.S. (1958): Temperature in relation to sesonal development of British dragonflies (Odonata). Proceedings of the Xth International Congress of Entomology, Montreal 2: 755-757.

Corbet, P.S. (1959): Notes on the insect food of the Nile Crocodile in Uganda. Proc. Roy. entomol. Soc. Lond. (A) 34: 17-22.

Corbet, P.S. (1959): The larval development and emergence of Aeshna cyanea (Müll.) (Odon., Aeshnidae). Entomol. monthly magaz. 95: 241-245.

Corbet, P.S. (1960): Patterns of circadian rhythms in insects. Cold Spring Harbour Symp. quant. Biol., New York 25: 357-360.

Corbet, P.S. (1960): The food of a sample of crocodiles (Crocodylus niloticus L.) from Lake Victoria. Proc. Zool. Soc. London 133: 561-572.

Corbet, P.S. (1961): Entomological studies from a high tower in Mpanga Forest, Uganda. XII. Observations on Ephemeroptera, Odonata and some other orders. Trans. Roy. entomol. Soc. Lond. 113: 356-361.

Corbet, P.S. (1961): The food of non-cichlid fishes in the Lake Victoria basin, with remarks on their evolution and adaptation to lacustrine conditions. Proc. zool. Soc. Lond. 136: 1-101.

Corbet, P.S. (1961): The recognition of parous dragonflies (Odonata) by the presence of follicular relics. Entomologist 94: 35-37.

Corbet, P.S. (1962): A biology of dragonflies. Witherby, London. 247 pp.

Corbet, P.S. (1962): Age-determination of adult dragonflies (Odonata). Verhandlungen des 11. Internationalen Kongress für Entomologie, Wien (1960) 3: 287-289.

Corbet, P.S. (1962): Observations on the attachment of Simulium pupae to larvae of Odonata. Ann. trop. Med. Parasit. 56: 136-140.

Corbet, P.S. (1964): Les libellules du Quebec, by A. Robert. Ministere du Tourisme, de la chasse et de la Peche, Province de Quebec. Service de la Fauna, Bull. I: 223 pp, 1963. Can. Entomol. 97: 111-112.

Corbet, P.S. (1964): Les libellules du Québec, by A. Robert. Ministère du Tourisme, de la chasse et de la Pêche, Province de Québec. Service de la Faune, Bull. 1: 223 pp, 1963. Canadian Field-Naturalist 78: 123-124.

Corbet, P.S. (1964): Temporal patterns of emergence in aquatic insects. Can. Entomol. 96: 264-279.

Corbet, P.S. (1965): Review: Les libellules du Quebec. Canadian Entomologist 97: 111

Corbet, P.S. (1966): The role of rhythms in insect behaviour. Symp. Royal entomological society of London 3: 13-28.

Corbet, P.S. (1966): The study of Odonata. In: G.B. Wiggins, "Centennial of Entomology in Canada 1863-1963. A Tribute to Edmund M. Walker. Life Sciences, Royal Ontario Museum, University of Toronto: 70-78.

Corbet, P.S. (1967): A dragonfly new to Canada. Canadian Field-Naturalist 81: 230.

Corbet, P.S. (1968): Les odonates de l'Europe occidentale, du Nord de l'Afrique et des Îles atlantiques, from P. Aguesse. Faune de l'Europe et du Bassin méditerranéen. 4. Masson et Cie, Paris. 255 p., 1968. Nature, London 220: 1359.

Corbet, P.S. (1968): The Odonata of Ontario. Proceedings of the North central Branch of the entomological society of America (1967) 22: 116-117.

Corbet, P.S. (1969): Book review: Les Odonates de l'Europc Occidentale, du Nord de l'Afrique et des iles Atlantiques. By P. Aguesse. Can. Entomol. 101: 335-336.

Corbet, P.S. (1969): Dr. Edmund Murton Walker (1877-1969) in memoriam. Tombo 12: 2-3.

Corbet, P.S. (1970): Letter to the Editor. Tombo 13: 32.

Corbet, P.S. (1972): Announcing the formation of the International Odonatological Society and its journal. Bull. entomol. Soc. Am. 18(1): 6.

Corbet, P.S. (1972): Damselflies. In: Encyclopedia of the Animal World. Vol. 6: 528- Elsevier International Projects. London.

Corbet, P.S. (1972): Dragonflies. In: Encyclopedia of the Animal World. Vol. 7: 592-596.

Corbet, P.S. (1972): International Odonatological Society. Bulletin of the entomological society of Canada 4(1): 12.
Corbet, P.S. (1974): Entomological reflections. Bulletin of the entomological society of Canada 6(3): 70-75.
Corbet, P.S. (1974): Odonata. In: Encyclopedia Britannica, 15th Edition, Vol. 13. Benton. Chicago: 507-509.
Corbet, P.S. (1976): Obituary: A.E. Gardner. Odonatologica 5: 387-390.
Corbet, P.S. (1977): Obituary: J.S. Armstrong. Odonatologica 6: 293-295.
Corbet, P.S. (1978): Book review: The dragonflies of British Columbia by R.A. Cannings & K.M. Stuart. Notul. Odonatol. 1: 32-34.
Corbet, P.S. (1978): John Scaife Armstrong: 1892-1977. New Zealand Entomologist 6(4): 444-446.
Corbet, P.S. (1979): Corrigenda for Volume III of "The Odonata of Canada and Alaska" (1975). Canadian Entomologist 111(3): 225-232.
Corbet, P.S. (1979): Odonata. In: Danks, H.V. (Ed.): Canada and its insect fauna. Memoirs of the entomological society of Canada 108: 308-311.
Corbet, P.S. (1979): Pantala flavescens (Fabricius) in New Zealand (Anisoptera: Libellulidae). Odonatologica 8: 115-121.
Corbet, P.S. (1980): Biology of Odonata. Ann. Rev. Entomol. 25: 189-217.
Corbet, P.S. (1981): Seasonal incidence of Anisoptera in light-traps in Trinidad, West Indies. Odonatologica 10: 179-187.
Corbet, P.S. (1981): Water lizards and aerial dragons. Contact, University of Dundee 7(3): 47-50.
Corbet, P.S. (1981): Water lizards and aerial dragons. Inaugural Lecture, Univeristy of Dundee: VI + 16 pp.
Corbet, P.S. (1983): A biology of dragonflies. (Reprint). Classey. Faringdon. Oxon. ISBN 0 860960196. 247 pp.
Corbet, P.S. (1983): Odonata in phytotempata. In: Frank, J.H. & L.P. Lonnibos (Ed.): Phytotelmata: terrestrial plants as host for aquatic insect communities. Plexus, Medford. New Jersey: 29-54.
Corbet, P.S. (1984): Dr. M.A. Lieftinck's 80th birthday celebrated. Selysia 13(2): 19.
Corbet, P.S. (1984): Orientation and reproductiive condition of migrating dragonflies (Anisoptera). Odonatologica 13: 81-88.
Corbet, P.S. (Ed.) (1984): Current topics in dragonfly biology. Societas Internationalis Odonatologica Rapid Communications (Supplements) 2: X, 46 pp.
Corbet, P.S. (1985): Book review: Proceedings of the First Indian Symposium of Odonatology: edited by S. Mathavan. Notulae Odonatologicae 2: 107.
Corbet, P.S. (1986): Using dragonflies to suppress mosquitoes in domestic water-storage containers. Waterlines 4: 10-11.

Corbet, P.S. (Ed.) (1986): Current topics in dragonfly biology 2. Societas Internationalis Odonatologica Rapid Communications (Supplements) 6: VIII, 32 pp.
Corbet, P.S. (1987): Dragonflies and their New Zealand representatives. In: Rowe, R.J.: The dragonflies of New Zealand. Auckland University Press.: 32-53.
Corbet, P.S. (1987): Meeting and mating in dragonflies. Antenna 11(1): 22-24.
Corbet, P.S. (1987): Obituary: Thomas Townely Macan. Odonatologica 16: 99-102.
Corbet, P.S. (1988): Current topics in dragonfly biology 3. Societas Internationalis Odonatologica Rapid Communications (Supplements) 8: VIII, 24 pp.
Corbet, P.S. (1988): Foreword. In: Askew, R.R.: The dragonflies of Europe. Harley Books. Martins: 7.
Corbet, P.S. (1988): Ninth International Symposium of Odonatology, Madurai, India, 18-23rd January, 1988. Antenna 12(2): 65.
Corbet, P.S. (1990): Current topics in dragonfly biology 4. Societas Internationalis Odonatologica Rapid Communications (Supplements) 12: VIII, 28 pp.
Corbet, P.S. (1990): Suppression of the yellow fever mosquito by augmentative release of dragonfly larvae (Odonata: Libellulidae). Kimminsia 1(2): 12.
Corbet, P.S. (1990): Tenth International Symposium of Odonatology. Antenna 14(1): 24.
Corbet, P.S. (1991): A brief history of odonatology. Adv. Odonatol. 5: 21-44.
Corbet, P.S. (1991): Cynthia Longfield. Indipendent, Issue of July 5: 27.
Corbet, P.S. (1991): Dragonflies. British Wildlife 2: 175.
Corbet, P.S. (1991): Further comments on suppression of the yellow fever mosquito by augmentative release of dragonfly larvae. Selysia 20(2): 1.
Corbet, P.S. (1991): Obituary: Cynthia Longfield (1986-1991). J.Br. Dragonfly Soc. 7(2): 29-32.
Corbet, P.S. (1991): Odonatology in Algeria. Kimminsia 2: 14.
Corbet, P.S. (1991): Robert Gambles - a tribute. Kimminsia 2(1): 1.
Corbet, P.S. (1991): Suppression of the Yellow Fever Mosquito by augmentative release of dragonfly larvae (Odonata: Libellulidae). Vector Ecology Newsletter 22: 5.
Corbet, P.S. (1991): Supression of the yellow fever mosquito by augmentative release of dragonfly larvae (Odonata: Libellulidae). Selysia 20(1): 3.
Corbet, P.S. (1993): Are Odonata useful as bioindicators? Libellula 12(3/4): 91-102.
Corbet, P.S. (1993): Habitats and habits of world dragonflies and the need to conserve species and habitat. Abstracts of the International Symposium on the Conservation of Dragonflies and Their Habitats, 14th August, 1993. Kushiro: 7-9.

Corbet, P.S. (1993): International Symposium on the Conservation of dragonflies and their habitats. Kimminsia 4(2): 13-14.
Corbet, P.S. (1993): Odonatology in Algeria (2). Kimminsia 4(2): 14-15.
Corbet, P.S. (1993): The first ten years of the British Dragonfly Society. J. Br. Dragonfly Soc. 9: 25-39.
Corbet, P.S. (1994): Dr. Tony Watson, 1935-1993. Selysia 23(1): 1.
Corbet, P.S. (1994): Obituary: J.A.L. Watson. The Caian, November 1994.
Corbet, P.S. (1994): Tony Watson - a tribute. Kimminsia 5(1): 1-2.
Corbet, P.S. (1994): Wonders of dragonfly biology. Proceedings of the 12nd International Symposium of Odonatologym Osaka: 73-77. (Japanese version: 68-73).
Corbet, P.S. (1995): [Habitats and habits of world dragonflies and the need to conserve species and habitats]. Bulletin of the Hokkaido odonatological society 7(Suppl.): 32-35.
Corbet, P.S. (1995): Habitats and habits of world dragonflies and the need to conserve species and habitats. Proceedings of the International Symposium on the Conservation of Dragonflies and their habitats. Kushiro, Hokkaido, Japan, 13-15 August 1993: VI, 1-7.
Corbet, P.S. (1995): Perspectives in Odonatology. Notes from a workshop during the GdO meeting, Höxter, 13. March 1994. Libellula 14(1/2): 105-108.
Corbet, P.S. (1996): Behavior & ecology of dragonflies. Kimminsia 7(2): 12.
Corbet, P.S. (1996): Obituary: Peter Miller. Independent, Issue 6 May 1996:
Corbet, P.S. (1996): Peter Miller - a tribute. Selysia 24(1): 1-2.
Corbet, P.S. (1996): Using dragonflies to suppress mosquitoes in domestic water-storage containers. Waterlines 4(3): 10-11.
Corbet, P.S. (1997): Obituary: Peter Miller (1931-1996). J. Br. Dragonfly Soc. 13: 1-3.
Corbet, P.S. (1998): Préface. In: d'Aguilar, J. & J.-L- Dommanget: Guide des libellules d'Europe et d'Afrique du Nord. Delachaux & Niestlé. Lausanne. Paris: 5-6.
Corbet, P.S. (1999): An afrotropical marvel: Zygonyx natalensis (R. Martin). W.D.A.'s Agrion 3(1): 10.
Corbet, P.S. (1999): Damselfly. Dragonfly. In: Encyclopaedia Britannica, Micropaedia, Benton, Chicago.
Corbet, P.S. (1999): Dragonflies. Behaviour and Ecology of Odonata. Harley Books. Colchester. ISBN 0 946589 64 X: 829 pp.
Corbet, P.S. (1999): Odonata. In: Encyclopaedia Britannica, Micropaedia, Benton, Chicago.
Corbet, P.S. (2000): Book review: A Guide to the Dragonflies of Great Britain, Arlequin Press, Chelmsford, Essex CM1 1SW, England (1999) 21 x 15cm, 128pp.Journal of the British Dragonfly Society 16(1): 31-32.

Corbet, P.S. (2000): The first recorded arrival of Anax junius Drury (Anisoptera: Aeshnidae) in Europe: A scientist's perspective. Int. J. Odonatol. 3(2): 153-162.

Corbet, P.S. (2002): European meeting of the Worldwide Dragonfly Association (WDA) in Leiden. Nieuwsbrief van de Nederlandse vereniging voor libelebstudie 6(3): 4 .

Corbet, P.S. (2002): Stadia and growth ratios of Odonata: a review. Int. J. Odonatol. 5: 45-73.

Corbet, P.S. (2002): Waterside reminiscences. Agrion 6(2): 17.

Corbet, P.S. (2003): A brief odonatological excursion to Namibia. Agrion 7(1): 6.

Corbet, P.S. (2003): A positive correlation between photoperiod and development rate in summer species of Odonata could help to make emergence date appropriate to latitude: a testable hypothesis. J. entomol. Soc. Brit. Columbia 100: 3-17.

Corbet, P.S. (2003): Book review: Moore, N.W. (2002): Oaks, dragonflies and people. Harley Books, Martin. Essex/UK. J. Br. Dragonfly Soc. 19: 57-59.

Corbet, P.S. (2003): Ecological perspectives of African Odonata. Cimbebasia 18: 167-172.

Corbet, P.S. (2003): Leiden, June 2002. Agrion 7(1): 3-4.

Corbet, P.S. (2003): Obituary: Faith Evans (née Tillyard), 1912-2003. Agrion 7(2): 25-26.

Corbet, P.S. (2003): Obituary: Ronald Ian Silsby, 1921-2002. Agrion 7(2):

Corbet, P.S. (2003): R.J. Tillyard FRS (1881-1937): a giant among odonatologists. Agrion 7(2): 21-24.

Corbet, P.S. (2003): Reproductive behaviour of Odonata: the history of a mystery. Int. J. Odonatol. 6: 185-193.

Corbet, P.S. (2003): Reviews: Introcucing the dragonflies of British Columbia and the Yukon - Robert A. Cannings. Royal British Columbia Museum. ISBN: 0772646376. Agrion 7(1): 9-10.

Corbet, P.S. (2003): WDA has a Patron: Prof. Emer. E.G. Wilson, Harvard Univ. Agrion 7(1): 1-2.

Corbet, P.S. (2004): Ballistic defaecation by anisopteran larvae (Odonata): a way to increase foraging success? Int. J. Odonatol. 7: 25-32.

Corbet, P.S. (2004): Foreword. Askew R.R. (2004): The Dragonflies of Europe (revised edition). Harley Books. Colcester. ISBN: 0946589755: 6.

Corbet, P.S. (2004): Review: A guide to the dragonflies of Borneo. Their identification and biology - A.G. Orr. 2003. Natural History Publications (Borneo). ISBN 983-812-069-3. Agrion 8(2): 20-21.

Corbet, P.S. (2004): Review: Dragonflies - Steve Brooks. The natural History Museum. ISBN 0-565-09180-8. Agrion 8(1): 11-12.

Corbet, P.S. (2004): The WDA Archive. Agrion 8(2): 13-14.

Corbet, P.S.] (2004): International Members of the ESO. Entomological Society of Ontario Newsletter 8(2): 9.

Corbet, P.S. (2006): Forests as habitats for dragonflies (Odonata). In: Rivera, AC (Ed). 2006. Forests and Dragonflies. 4th WDA Symposium of Odonatology, Pontevedra, Spain, July 2005. Pensoft Series Faunistica 61: 13-36.

Corbet, P.S. (2006): Review: Dragonflies of Peninsular Malaysia and Singapore. A pocket guide - A.G. Orr. 2003. Natural History Publications (Borneo). ISBN 983-812-103-7. Agrion 10(2): 27-28.

Corbet, P.S. (2006): Review: Dragonflies of Peninsular Malaysia and Singapore. A pocket guide - A.G. Orr. 2005. Natural History Publications (Borneo). ISBN 983-8121037. Agrion 10(2): 27-28.

Corbet P. S. (2007): Two current threats to the future of Entomology in Britain. Antenna 31: 208-213.

Corbet, P.S. (2007): Dragonflies: behavior and ecology of Odonata. Kaiyusha Publishers Co. Ltd., Tokyo.

Corbet, P.S. (2008): WDA Archivist's Report No.1. The origin and development of WDA: the first ten years, 1997-2007. Agrion 12(1): 30-36.

Corbet, P.S., May, M. (2003): Summaries of Board of trustees meetings at Beechworth. Agrion 7(2): 15-16.

Corbet, P.S.; Brooks, S. (2008): Dragonflies. Collins New Naturalist Library. ISBN-10: 0007151691. 312 pp.

Corbet, P.S.; Chowdhury, H. (2002): Voltinism of the Common Blue Damselfly Enallagma cyathigerum (Charpentier) in a Scottish loch: a preliminary study. J. Br. Dragonfly Soc. 18: 23-39.

Corbet, P.S.; Corbet, S.A. (1958): Emergence of a summer species of dragonfly. Nature, London 182: 194.

Corbet, P.S.; Corbet, S.A.; Kjellström-Corbet, K. (1983): Somatochlora arctica (Zetterstedt) in Perthshire, Scotland. Journal of the British Dragonfly Society 1(2): 25.

Corbet, P.S.; Dunkle, S.W.; Ubukata, H. (1995): Editors' preface: International Symposium on the Conservation of Dragonflies and their habitats. Kushiro, Hokkaido, Japan, 13-15 August 1993. Proceedings of the International Symposium on the Conservation of Dragonflies and their habitats. Kushiro, Hokkaido, Japan, 13-15 August 1993: II-III.

Corbet, P.S.; Eda, S. (1969): Odonata in southern Ontario, Canada, in August 1968. Tombo 12: 4-11.

Corbet, P.S.; Harvey, I.F. (1989): Seasonal regulation in Pyrrhosoma nymphula (Sulzer) (Zygoptera: Coenagrionidae) 1. Seasonal development in nature. Odonatologica 18: 133-145.

Corbet, P.S.; Harvey, I.F.; Morris, F.; Abisgold, J. (1989): Seasonal regulation in Pyrrhosoma nymphula (Sulzer) (Zygoptera: Coenagrionidae) 2. Effect of photoperiod on larval development in spring and summer. Odonatologica 18(4): 333-348.

Corbet, P.S.; Hoess, R. (1998): Sex ratio of Odonata at emergence. Int. J. Odonatol. 1: 99-118.

Corbet, P.S.; Longfield, C.; Moore, N.W. (1960): Dragonflies. The new naturalist. Collins. London. 260 pp.

Corbet, P.S.; Longfield, C.; Moore, N.W. (1985): Dragonflies (Reprint). The new naturalist. Collins. London. ISBN 0002190648. XIV, 260 pp.

Corbet, P.S.; May, M.; Parr, M. (2002): Prospects for WDA. Agrion 6(2): 13.

Corbet, P.S.; McCrae, A.W.R. (1981): Larvae of Hadrothemis scabrifrons (Ris) in a tree cavity in East Africa (Anisoptera: Libellulidae). Odonatologica 10(4): 311-317.

Corbet, P.S.; Miller, P.L. (1991): "Accompanying" behaviour as a means of prey acquisition by Brachytron leucosticta (Burmeister) and other Anisoptera. Odonatologica 20: 29-36.

Corbet, P.S.; Parr, M. (2008): The Fifth WDA International Symposium of Odonatology at Swakopmund, Namibia, April 2007: the scientific programme. Agrion 12(1): 8-9.

Corbet, P.S.; Prosser, R.J.S. (1986): Diagnosis of interecdysial development in final-instar larvae of Pyrrhosoma nymphula (Sulzer) (Zygoptera: Coenagrionidae). Odonatologica 15: 23-28.

Corbet, P.S.; Samways, M.J.; Watson, J.A.L.; Eda, S.; Dunkle, S.W.; Schmidt, E.; Kiauta, B.; Ott, J. (1995): Impressions and comments about the conservation of Kushiro Marsh as a habitat of dragonflies. Bulletin of the Hokkaido odonatological society 7(Suppl.): 18-26.

Corbet, P.S.; Scrimgeour, C.M.; Kiauta, B. (1984): Author Index for Odonatologtical Abstracts 1 - 4225 from Odonatologica Volumes 1 - 12. Societas Internationalis Odonatologica Rapid Communications (Supplements) 4(A): VIII + 64pp.

Corbet, P.S.; Scrimgeour, C.M.; Kiauta, B.; Holmquist, E.J. (1984): A topic index for Odonatological Abstracts 1-4225 from Odonatologica Volumes 1-12. Societas Internationalis Odonatologica Rapid Communications (Supplements) 4(B): VIII + 52 pp.

Corbet, P.S.; Suhling, F.; Soendgerath, D. (2006): Voltinism of Odonata: a review. Int. J. Odonatol. 9: 1-44.

Corbet, P.S.; Walley, G.S. (1969): The dragonflies (Odonata) of the Mer Bleue. Canadian Field-Naturalist 83: 14-16.

Ferreras-Romero, M.; Atienzar, M.D.; Corbet, P.S. (1999): The life cycle of Onychogomphus uncatus (Charpentier, 1840) (Odonata: Gomphidae) in the Sierra Morena Mountains (southern Spain): an example of protracted larval development in the Mediterranean basin. Arch. Hydrobiol. 144(2): 215-228.

Ferreras-Romero, M.; Atienzar, M.D.; Corbet, P.S. (2000): Voltinism of Calopteryx haemorrhoidalis (Vander Linden) in the Sierra Morena mountains, southern Spain (Zygoptera: Calopterygidae): a preliminary study. Int. J. Odonatol. 3(2): 125-130.

Ferreras-Romero, M.; Corbet, P.S. (1995): Seasonal patterns of emergence in Odonata of a permanent stream in southwestern Europe. Aquat. Insects 17: 123-127.

Ferreras-Romero, M.; Corbet, P.S. (1999): The life cycle of Cordulegaster boltonii (Donovan, 1807) (Odonata: Cordulegastridae) in the Sierra Morena Mountains (southern Spain). Hydrobiologia 405: 39-48.

Green, J.; Corbet, S.A.; Bettney, E. (1974): Ecological studies on crater lakes in West Cameroon, Debundsha Lake. J. Zool., London 173: 199-223.

Harvey, I. F.; Corbet, P.S. (1985): Territorial behaviour of larvae enhances mating success of male dragonflies. Anim. Behav. 33: 561-565.

Harvey, I.F.; Corbet, P.S. (1986): Territorial interactions between larvae of the dragonfly Pyrrhosoma nymphula: outcome of encounters. Animal Behav. 34: 1550-1561.

May, M.; Corbet, P. (2003): Gathering useful information about the seasonal ecology of Anax junius. Argia 15(2): 15-16.

May, M.; Corbet, P.S. (2003): The third WDA International Symposium of Odonatology. Agrion 7(2): 14-15.

May, M.L.; Corbet, P.S. (2001): Occurrence and taxonomic significance of a palpal spine in larvae of Enallagma and other genera (Odonata: Coenagrionidae). Int. J. Odonatol. 4: 41-49.

McCrae, A.W.R.; Corbet, P.S. (1982): Oviposition behaviour of Tetrathemis polleni (Sélys): A possible adaptation to life in turbid pools (Anisoptera: Libellulidae). Odonatologica 11(1): 12-31.

Moore, N.W.; Corbet, P.S. (1990): Guidelines for monitoring dragonfly populations. Journal of the British Dragonfly Society 6(2): 21-23.

Parr, M.; Corbet, P.S. (1999): The 1999 International Congress of Odonatology. Agrion 4(1): 5-6.

Parr, M.; Corbet, P.S. (2000): The 1999 International Congress of Odonatology. WDA's Agrion 4(1): 5-6.

Pritchard, G. (Ed.); Corbet, P.S. (1992): Current topics in dragonfly biology Vol. 5 - including a discussion focusing on survival during the hot dry season. Societas Internationalis Odonatologica Rapid Communications (Supplements) 15: VIII, 29 pp.

Reuben, R.; Rao, D.R.; Sebastian, A.; Corbet, P.S.; Wu, N.; Liao, G. (1989): Biological control methods suitable for community use. In Curtis, C.F. (Ed.) Appropriate technology in vector control. Boca Raton, Florida, CRC Press: 139-158.

Samraoui, B.; Bouzid, S.; Boulahbal, R.; Corbet, P.S. (1993): Seasonal migration and pre-reproductive diapause in Aeshna mixta, Sympetrum meridionale and S. striolatum as an adaptation to the Mediterrannean climale (N.E. Algeria). Societas International is Odonalologica Symposium Abstracts: 33-34.

Samraoui, B.; Bouzid, S.; Boulahbal, R.; Corbet, P.S. (1998): Postponed reproductive maturation in upland refuges maintains life-cycle continuity during the hot, dry season in Algerian dragonflies (Anisoptera). Int. J. Odonatol. 1: 118-135.

Samraoui, B.; Corbet, P.S. (2000): The Odonata of Numidia, northeastern Algeria. Part I: status and distribution. Int. J. Odonatol. 3: 11-25.

Samraoui, B.; Corbet, P.S. (2000): The Odonata of Numidia, northeastern Algeria. Part II: Seasonal ecology. Int. J. Odonatol. 3: 27-39.

Sebastian, A.; Sein, M.M.; Thu, M.M.; Corbet, P.S. (1990): Suppression of Aedes aegypti (L.) (Diptera: Culicidae) using augmentative release of dragonfly larvae (Odonata: Libellulidae) with community participation in Yangon, Myanmar. Bull. entomol. Res. 89: 223-232.

Sebastian, A.; Sein, M.M.; Corbet, P.S.; Thu, M.M. (1991): Suppression of the yellow fever mosquito, Aedes aegypti (L.) (Diptera: Culicidae) by augmentative release of the dragonfly Crocothemis servilia (Drury) (Odonata: Libellulidae). Opuscula zoologica fluminensia 72: 1-5.

Walker, E.M.; Corbet, P.S. (1975): The Odonata of Canada and Alaska. Vol. 3. Univ. Toronto Press. 307 pp.

Walker, E.M.; Corbet, P.S. (1978): The Odonata of Canada and Alaska Vol. 3: Part III: The Anisoptera - Three Families. (Macromiidae, Corduliidae, Libellulidae). 2. Edit. University of Toronto Press. ISBN 0-8020-5321-1. XVI, 308 pp.

Yenning, G.; Caine, R.; Corbet, P.S. (2003): Obituary: David Alien L. Davies. Lancet 361 (9375): 2163.

Bibliographie von Philip Corbet ohne odonatologischen Bezug

Bellamy, R.E.; Corbet, P.S. (1973): Combined autogenous and anautogenous ovarian development in individual Culex tarsalis Coq. (Diptera, Culicidae). Buttetin of Entomological Research 63: 335-346.

Bellamy, R.E.; Corbet, P.S. (1974): Occurrence of ovariolar dilatations in nulliparous mosquitoes. Mosquito News 34: 334.

Chadee, D.D., Corbet, P.S., Talbot, H. (1995): Proportions of eggs laid by Aedes aegypti on different substrates within an ovitrap in Trinidad, West Indies. Med. Vet. Entomol. 9: 66–70.

Chadee, D.D.; Corbet, P.S. (1987): Seasonal incidence and diel patterns of oviposition in the field of the mosquito, Aedes aegypti (L.) (Diptera: Culicidae) in Trinidad, West Indies: a preliminary study. Ann. Trop. Med. Parasitol. 81(2): 151-161.

Chadee, D.D.; Corbet, P.S. (1989): Diel pattern of oviposition in the laboratory of the mosquito Aedes albopictus (Skuse) (Diptera: Culicidae). Ann. Trop. Med. Parasitol. 83(4): 423-429.

Chadee, D.D.; Corbet, P.S. (1990): A night-time role of the oviposition site of the mosquito, Aedes aegypti (L.) (Diptera: Culicidae). Ann. Trop. Med. Parasitol. 84(5): 429-433.

Chadee, D.D.; Corbet, P.S. (1990): Incidence and diel pattern of oviposition outdoors of the mosquito, Aedes aegypti (L.) (Diptera: Culicidae) in Trinidad, W.I. in relation to solar aspect. Ann. Trop. Med. Parasitol. 84(1): 63-78.

Chadee, D.D.; Corbet, P.S. (1990): Diel patterns of oviposition indoors of the mosquito, Aedes aegypti (L.) (Diptera: Culicidae) in Trinidad, W.I.: a preliminary study. Ann. Trop. Med. Parasitol. 84(1): 79-84.

Chadee, D.D.; Corbet, P.S. (1991): The gonotrophic status of female Aedes aegypti (L.) overnight at the oviposition site (Diptera: Culicidae). Ann. Trop. Med. Parasitol. 85(4): 461-466.

Chadee, D.D.; Corbet, P.S. (1993): The gonotrophic status and diel pattern of entry to outdoor oviposition sites of female Aedes aegypti (L.) (Diptera: Culicidae). Ann. trop. Med. Parasitol. 87(3): 263-268.

Chadee, D.D.; Corbet, P.S.; Greenwood, J.J.D. (1990): Egg-laying yellow fever mosquitoes avoid sites containing eggs laid by themselves or by conspecifics. Entomol. Exp. Appl. 57: 295–298.

Chadee, D.D.; Hubbard, S.F.; Corbet, P.S. (1987): Diel oviposition pattern of Toxorhynchites moctezuma (Diptera: Culicidae) in the field in Trinidad. West Indies Journal of medical entomology 24(1): 1-4

Corbet, P. S. (1955): Rhythmic flight activity of certain East African Trichoptera. Nature 75: 1122.

Corbet, P. S. (1958): Identification of adult Mansonia (Coquillettidia) pseudoconopas Theobald and M. (C.) maculipennis Theobald (Diptera: Culicidae). Proc. R. ent. Soc. Lond. (B) 27:127-128.

Corbet, P. S. (1963): The oviposition cycles of certain sylvan Culicine mosquitoes (Diptera, Culicidae) in Uganda. Ann. trop. Med. Parasit. 57: 371-381.

Corbet, P. S.; Bellamy, R.E.; Kempster, R.H. (1971): Automatic devices for recording oviposition periodicity of mosquitoes in the laboratory. Mosquito News 31(4): 516-524.

Corbet, P.S (1963b). The oviposition-cycles of certain sylvan culicine mosquitoes in Uganda (Diptera: Culicidae). Ann. Trop. Med. Parasit. 57: 371-381.

Corbet, P.S. (1955): A critical response to changing length of day in an insect. Nature 175: 338-339.

Corbet, P.S. (1956): Effects of D.D.T. on the feeding habits of insectivorous fishes in the Victoria Nile. EAFRO Ann. Rep. (1955/56) App. E: 19.

Corbet, P.S. (1957): Duration of the aquatic stages of Povilla adusta Navás (Ephemeroptera: (Polymitarcidae). Bull. entomol. Res. 48: 243-250.

Corbet, P.S. (1958): Effects of simulium control on insectivorous fishes. Nature 181: 570-671.

Corbet, P.S. (1958): Identification of adult Mansonia (Coquillettidia) pseudoconopas Theobald and M. (C.) maculipennis Theobald (Diptera: Culicidae). Proc. R. ent. Soc. Lond. (B) 27: 127-128.

Corbet, P.S. (1958): Insect nuisance at the Owen Falls hydroelectric scheme. EAFRO Ann. Rep. (1956/1957): 34-35.

Corbet, P.S. (1958): Larvae of certain East African Trichoptera. Rev. Zool. Bot. afr. 58(3-4): 203-213.

Corbet, P.S. (1958): Lunar periodicity of aquatic insects in Lake Victoria. Nature 182: 330-331.

Corbet, P.S. (1958): Some effects of DDT on the fauna of the Victoria Nile. Rev. Zool. Bot. Afr. 57(1-2): 73-95.

Corbet, P.S. (1959): Notes on the insect food of the Nile Crocodile in Uganda. Proc. R. ent. Soc. Lond. (A) 34: 17-22.

Corbet, P.S. (1959): Recognition of individual nulliparous and parous mosquitoes. Trans. Roy. Soc. Trop. Med. Hyg. 53: 297.

Corbet, P.S. (1959): The food of non-cichlid fishes in Lake Victoria. EAFRO Ann. Rep. (1958) App. A: 21-37.

Corbet, P.S. (1960). Larvae of certain East African Ephemeroptera. Rev. Zool. Bot. Afr. 61:119-129.

Corbet, P.S. (1960). Patterns of circadian rhythms in insects. Cold Spring Harb. Symp. Quant. Biol. 25: 357-360.

Corbet, P.S. (1960): A new species of Afronurus (Ephemeroptera) and its association with Simulium in Uganda. Proc. Roy. Entomol. Soc. London (B) 29: 68-72.

Corbet, P.S. (1960): Breeding sites of non-cichlid fishes in Lake Victoria. Nature 187: 616-617.

Corbet, P.S. (1960): Larvae of certain East African Ephemeroptea. Rev. Zool. Bot. Afr. 61: 119-129.

Corbet, P.S. (1960): Recognition of nulliparous mosquitoes without dissection. Nature 187: 525-526

Corbet, P.S. (1960): The food of a sample of crocodiles (Crocodilus crocodilus L.) from Lake Victoria. Proc. Zool. Soc. Lond. 133: 561-572.

Corbet, P.S. (1960): The food of non-cichlid fishes in Lake Victoria. EAFRO Ann. Rep. (1959): 33-40.

Corbet, P.S. (1961): Entomological studies from a high tower in Mpanga Forest, Uganda. XII. Observations on Ephemeroptera, Odonata and some other orders. Trans. Roy. ent. Soc. London 113(11): 356-368.

Corbet, P.S. (1961): Entomological studies from a high tower in Mpanga forest, Uganda IV. Mosquito breeding at different levels in and above the forest. Trans. Roy. Entomol. Soc. London 113: 273-283.

Corbet, P.S. (1961): Entomological studies from a high tower in Mpanga forest, Uganda. VI. Nocturnal flight activity of Culicidae and Tabanidae as indicated by light traps. Trans. Roy. entomol. Soc. Lond. 113: 301-314.

Corbet, P.S. (1961): Entomological studies from a high tower in Mpanga Forest, Uganda. X. Observations on Sphingidae (Lepidoptera). Trans. Roy. Entomol. Soc. London 113: 351-352.

Corbet, P.S. (1961): The biological significance of the attachment of immature stages of Simulium to mayflies and crabs. Bull. entomol. Res. 52: 695-699

Corbet, P.S. (1961): The food of non-cichlid fishes in the Lake Victoria basin, with remarks on their evolution and adaptation to lacustrine conditions. Proc. Zool. Soc. Lond. 136(1): 1-101.

Corbet, P.S. (1962). The sugar-feeding cycle in a cage population of mosquitoes. Entomologia Experimentalis et Applicata 5: 223-232.

Corbet, P.S. (1962): A note on the biting behaviour of the mosquito, Aedes ochraceus, in a village in Kenya. East Afr. Med. J. 39: 511-514.

Corbet, P.S. (1962): New species of Afronurus (Ephemeroptera) from Tanganyika and records of Simulium associated with Afronurus larvae. Annals and Magazine of Natural History (13)4: 573-576.

Corbet, P.S. (1962): Notes on the predatory habits of Eretmapodites larvae. East Afr. Virus Res. Inst. Rept. 12: 44.

Corbet, P.S. (1962): Observations on the attachment of Simulium pupae to larvae of Odonata. Ann. Trop. Med. Parasitol. 56:136-140.

Corbet, P.S. (1962): The age composition of biting mosquito populations according to time and level: a further study. Bull. entomol. Res. 53: 409-416.

Corbet, P.S. (1963): Observations on Toxorhynchites brevipalpis conradti Gruenb. (Diptera: Culicidae) in Uganda. Bull. ent. Res. 54: 9-17.

Corbet, P.S. (1963): Reliability of parasitic water mites (Hydracarina) as indicators of physiological age in mosquitoes (Diptera: Culicidae). Entomol. Expt. Appl. 6: 215-233.

Corbet, P.S. (1963): The ovarian condition of certain sylvan mosquitos in Uganda (Diptera: Culicidae). Bull. entomol. Res. 55: 367-382.

Corbet, P.S. (1963): The oviposition-cycles of certain sylvan culicine mosquitoes (Diptera, Culicidae) in Uganda. Ann. Trop. Med. Parasitol. 57: 371-381.

Corbet, P.S. (1963): Seasonal patterns of age-composition of sylvan mosquito populations in Uganda (Diptera, Culicidae). Bull. Entomol. Res. 54: 213-227.

Corbet, P.S. (1964). Observations on the swarming and mating of mosquitoes in Uganda. Proc. R. Ent. Soc. London Ser. A, Gen. Ent. 39: 15-22.

Corbet, P.S. (1964): Autogeny and oviposition in arctic mosquitoes. Nature 2003 (4945): 669.

Corbet, P.S. (1964): Observations on mosquitoes ovipositing in small containers in Zika Forest (Uganda). J. Anim. Ecol. 33: 141-164.

Corbet, P.S. (1964): Temporal patterns of emergence in aquatic insects. Can. Entomol. 96: 264-279.

Corbet, P.S. (1965): An insect emergence trap for quantitative studies in shallow ponds. Canadian Entomologist 97: 845-848.

Corbet, P.S. (1965): Asymmetry in eocrepuscular diel periodicities of insects. Can. Entomol. 97: 878-880.

Corbet, P.S. (1965): Reproduction in mosquitoes of the high arctic. Proc. XII Int. Congr. Entomol., London (1964) 817-818.

Corbet, P.S. (1965): Review: The Physiology of Diurnal Rhythms by Janet E. Harker. Journal of Animal Ecology 34(2): 482-483

Corbet, P.S. (1966) A method for sub-sampling insect collections that vary widely in size. Mosquito News 26: 420-424.

Corbet, P.S. (1966): A quantitative method for assessing the nuisance caused by non-biting aquatic insects. Can. Entomol. 98: 683-687.

Corbet, P.S. (1966): Diel patterns of mosquito activity in a high arctic locality: Hazen Camp, Ellesmere Island, N.W.T. Can. Entomol. 98:1238-1252.

Corbet, P.S. (1966): Diel periodicities of emergence and oviposition in riverine Trichoptera. Can. Ent. 98: 1025-1034.

Corbet, P.S. (1966): Parthenogenesis in caddisflies (Trichoptera). Can. J. Zool. 44: 981-982.

Corbet, P.S. (1966): The role of rhythms in insect behavior. Pages 13-28. In: P. T. Haskell (ed.), Insect Behavior. London.

Corbet, P.S. (1967): Facultative autogeny in arctic mosquitoes. Nature 215: 662-663.

Corbet, P.S. (1967): Further observations on diel periodicities of weather factors near the ground at Hazen Camp, Ellesmere Island, N.W.T. Operation Hazen Number 31, Defense Research Board of Canada.

Corbet, P.S. (1967): The diel oviposition periodicity of the black fly, Simulium vittatum. Can. J. Zool. 45: 583-584.

Corbet, P.S. (1968): Liberties with Language. Science 159: 34.

Corbet, P.S. (1969): Terrestrial microclimate: Amelioration at high latitudes. Science 166: 865-866.

Corbet, P.S. (1969): The Arctic as an environment for research on rhythms. Nature 222(5191): 392.

Corbet, P.S. (1970): Pest management: objectives and prospects on a global scale, p. 191-204. In: R. L. Rabb & F. E. Guthrie (eds.), Concepts of Pest Management. North Carolina St. Univ., Raleigh.

Corbet, P.S. (1970): The use of parasitic water-mites for age grading female mosquitoes. Mosquito News 30: 436-438.

Corbet, P.S. (1971): Balancing equation between crop yield and pest control. Science Forum 4: 6-?.

Corbet, P.S. (1971): Population and resources: a policy for Canada. Science Forum, University of Toronto Press 4(3): 6-8.

Corbet, P.S. (1972): The microclimate of arctic plants. and animals, on land and in fresh water. Acta Arctica 18: 1–43

Corbet, P.S. (1973): Application, feasibility and prospects of integrated control, p. 185-95. In: P. W. Geier, L. R. Clark, D. J. Anderson & H. A. Nix (eds.), Insects: Studies in Population Management. Ecol. Soc. Australia (Mem. 1), Canberra.

Corbet, P.S. (1973): Habitat manipulation in the control of insect pests in Canada. Proc. Tall Timbers Conf. Ecol. Anim. Contr. Habitat Managem. 5: 147-171.

Corbet, P.S. (1977): Population: a biological approach. Ontario Naturalist 17(1): 26-30.

Corbet, P.S. (1981): Book review: From Arsenic to DDT: A History of Entomology in Western Canada. By Paul W. Riegert. Pp.357. ISBN 0-8020-5499-4. (University of Toronto: 1981.) $30. To be published in the UK on September 24, £18. Nature 292: 658

Corbet, P.S. (1981): Non-entomological impediments to the adoption of integrated pest-management. Protection ecology 3: 183-202.

Corbet, P.S. (1985): Prepupal killing behaviour in Toxorhynchites brevipalpis: a status report, p. 407-417. In: P. L. Lounibos, J. R. Rey & J. H. Frank (eds.), Ecology of Mosquitoes. Florida Med. Ent. Lab., Vero Beach.

Corbet, P.S. (1996): John David Gillett 1913-1995 – Obituary. Journal of the American Mosquito Control Association 12: 339-340.

Corbet, P.S. (2000): Michael Thomas Gillies - 1920-1999 – Obituary. Journal of the American Mosquito Control Association 16: 346-347.

Corbet, P.S. (2000): Mick Gillies - 1920-1999 – Obituary. Annals of Tropical Medicine and Parasitology 94: 529-531.

Corbet, P.S. (2005): G.A.H. McClelland - 1931-2005 – Obituary. Journal of the American Mosquito Control Association 21: 503-504.

Corbet, P.S. (2006): World's poor need real help. Letter to Editor. The Times, 28 November, p.18.

Corbet, P.S. (2007): Population Matters (very much indeed). www.cornwallhumanists.org.uk/humpop4.doc

Corbet, P.S. Gillett, J.D. (1961): Entomological studies from a high tower in Mpanga Forest, Uganda. I. Introduction. Trans. R. ent. Soc. Lond. 113: 249-253.

Corbet, P.S., Chadee, D.D. (1993): An improved method for detecting substrate preferences shown by mosquitoes that exhibit 'skip oviposition'. Physiol. Entomol. 18: 114-118.

Corbet, P.S.; Ali, H.J. (1987): Diel patterns of pupation and emergence, and protogyny, in Toxorhynchites brevipalpis brevipalpis (Theobald) (Diptera: Culicidae): a laboratory study. Ann. trop. med. parasitol. 81(4): 437-443.

Corbet, P.S.; Chadee, D.D. (1990): Incidence and diel pattern of oviposition outdoors of the mosquito, Aedes aegypti (L.) (Diptera: Culicidae) in Trinidad, WI in relation to solar aspect. Ann. Top. Med. Parasitol. 84(1): 63-78.

Corbet, P.S.; Chadee, D.D. (1992): The diel pattern of entry to outdoor oviposition sites by female Aedes aegypti (L.) (Diptera: Culicidae) that then laid eggs there: a preliminary study. Ann. Trop. Med. Parasitol. 86(5): 523-528.

Corbet, P.S.; Danks, H.V. (1973): Seasonal emergence and activity of mosquitoes in a high arctic locality. Can. Entomol. 105: 837-872.

Corbet, P.S.; Danks, H.V. (1974): Screen temperatures during the summers 1967 and 1968 at Hazen Camp, Ellesmere Island, N.W.T. Hazen 44: 11 pp. (Defence Research Board of Canada, Ottawa).

Corbet, P.S.; Danks, H.V. (1975): Egg-laying habits of mosquitoes in the high arctic. Mosquito News 35: 8-14.

Corbet, P.S.; Downe, A.E.R. (1966): Natural hosts of mosquitoes in northern Ellesimere Island. Arctic. Journal of the Arctic Institute of North America 19(2): 153-161

Corbet, P.S.; Downes, J.A.; Steyskal, G. (1965): Convection plumes from trees. Science 150: 1629.

Corbet, P.S.; Griffiths, A. (1963): Observations on the aquatic stages of two species of Toxorhynchites (Diptera: Culicidae) in Uganda. Proc. Roy. Entomol. Soc. London, Ser. A 38: 125-135.

Corbet, P.S.; Haddow, A.J.; Gillett, J.D. (1960): Observations on the oviposition-cycle of Aedes (Stegomyia) aegypti (Linnaeus), IV. Ann. Trop. Med. Parasitol. 54: 156-164.

Corbet, P.S.; Leroux, E.J. (1972): The population problem: a vital Canadian policy issue. Science Forum, University of Toronto Press 5(1): inside front and back covers.

Corbet, P.S.; Pearson, R.G. (1976): 47th ANZAAS Congress. Search 7: 409-410.

Corbet, P.S.; Schmid, F.; Augustin, C.L. (1966): The Trichoptera of St. Helen's Island, Montreal. I. The species present and their relative abundance at light. Can. Entomol. 98: 1284-1298.

Corbet, P.S.; Smith, S.M. 1974. Diel periodicities of landing of nulliparousand parous Aedes aegypti (L.) at Dar es Salaam, Tanzania (Diptera: Culicidae). Bull. Entomol. Res. 64: 111-121.

Corbet, P.S.; Tjønneland, A. (1955): Rhythmic flight activity of certain East African Trichoptera. - Nature 175 (4469): 1122-1123.

Corbet, P.S.; Tjønneland, A. (1955): The flight activity of twelve species of East African Trichoptera. - Univ. Bergen Årb., naturv. R., 9: 1-49.

Corbet, P.S.; Van Someren. E.C.C. (1962): Aedes (Stegomyia) opok sp. nov., a new species of mosquito from Uganda. Ann. trop. Med. and Parasit. 56: 73-77.

Corbet, P.S; Williams, M.C.; Gillett, J.D. (1961): O'Nyong-Nyong fever: an epidemic virus disease in East Africa. IV. Vector studies at epidemic sites. Trans. Roy. Soc. Trop. Med. Hyg.55:463–480.

Danks, H.V.; Corbet, P.S. (1973): A key to all stages of Aedes impiger and A. nigripes (Diptera: Culicidae), with a description of first-instar larvae and pupae. Can. Entomol.105: 367-376.

Danks, H.V.; Corbet, P.S. (1973): The sex ratios at emergence of two species of high arctic Aedes (Diptera: Culicidae). The Canadian Entomologist 105: 647-651.

Dave, D.C.; Corbet, P.S.; Greenwood, J.J.D. (1990): Egg-laying Yellow Fever Mosquitoes avoid sites containing eggs laid by themselves or by conspecifics Entomol. Exp. Appl. 57(3): 295-298

Davies, J.B.; Corbet, P.S.; Gillies, M.T.; McCrae, A.W.R. (1971): Parous rates in some Amazonian mosquitoes collected by three different methods. Bull. Entomol. Res. 61: 125–132.

Gillett, J.D.; Corbet, P.S.; Haddow, A.J. (1959): Observations on the oviposition-cycle of Aedes (Stegomyia) aegypti (Linnaeus). III. Ann. Trop. Med. Parasitol. 53: 132-136.

Gillett, J.D.; Corbet, P.S.; Haddow, A.J. (1961): Observations on the oviposition-cycle of Aedes (Stegomyia) aegypti (Linnaeus). VI. Ann. Trop. Med. Parasitol. 55: 427-431.

Gillett, J.D.; Haddow, A.J.; Corbet, P.S. (1959): Observations on the oviposition-cycle of Aedes (Stegomyia) aegypti (Linnaeus), II. Ann. Trop. Med. Parasitol. 53(1): 35-41.

Haddow, A. J., Gillett, J. D. & Corbet, P.S (1961): Removal of steel tower to Zika. E. Afr. Virus Res. Inst. Ann. Rep. 1960-1: 31-32.

Haddow, A.J., Corbet, P.S; Gillett, J. D. (1961): Entomological studies from a high tower in Mpanga Forest, Uganda. I, Introduction. Trans. R. ent. Soc. Lond. 113: 249-253.

Haddow, A.J., Gillett, J.D.; Corbet, P.S. (1959): Laboratory observations on pupation and emergence in the mosquito Aedes (Stegomyial aegypti (Linnaeus) . Ann. Trop. Med. Parasit. 53: 123-131.

Haddow, A.J.; Corbet, P.S. (1961): Entomological studies from a high tower in Mpanga Forest, Uganda. II. Observations on certain environmental factors at different levels. Trans. R. Ent. Soc. Lond. 113: 257-269.

Haddow, A.J.; Corbet, P.S.; Gillett, J.D. (1960): Laboratory observations on the oviposition-cycle in the mosquito Aedes (Stegomyia) apicoargenteus Theobald. Ann. Trop. Med. Parasitol. 54: 392-396.

Haddow, A.J.; Gillett, J.D.; Corbet, P.S. (1961): Observations on the oviposition-cycle of Aedes (Stegomyia) aegypti (Linnaeus), V. Ann. Trop. Med. Parasitol. 55: 343-356.

Haddow, A.J.; Yarrow, I.H.H.; Lancaster, G.A.; Corbet, P.S. (1961): Nocturnal flight cycle in the males of African doryline ants (Hymenoptera: Formicidae). Proc. Roy. Entomol. Soc. (A) 41: 103-106

Oliver, D.R.; Corbet, P.S. (1966): Aquatic habitats in a high arctic locality: the Hazen Camp study area, Ellesmere Island, N.W.T. Def. Res. Bd Can., D Phys R(G), Hazen 26. 115 pp. + 267 figs.

Packer, M. J.; Chadee, D. D.; Corbet, P. S. (1986): A gynandromorph of Aedes punctor from Scotland. British Mosquito Group Newsletter 1: 5.

Packer, M. J.; Corbet, P. S. (1987): A possible second generation of Aedes (Ochlerotatus) punctor (Kirby) in Scotland. British Mosquito Group Newsletter 4: 4.

Packer, M. J.; Corbet, P. S. (1987): Scottish records of Culiseta (Culicella) morsitans (Theobald) and Aedes (Ochlerotatus) cantans. British Mosquito Group Newsletter 4: 6.

Packer, M. J.; Corbet, P. S. (1989): Size variation and reproductiv success of female Aedes punctor (Diptera: Culicidae). Ecological Entomology 14, 297-309.

Packer, M.J., Corbet, P.S. (1989): Seasonal emergence, host-seeking activity, age composition and reproductive biology of the mosquito Aedes punctor. Ecol. Entomol. 14: 433-442.

Pearson, R.G.; Corbet, P.S. (1976): Energy in New-Zealand agriculture. Search 7: 418-423.

Reuben, R., Rao, D.R., Sebastian, A., Corbet, P.S., Neng, W. and Guohou, L. (1990): Biological control methods suitable for community use. In: Proceedings of Appropriate Technology in Vector Control, (Eds., C.F. Curtis), Florida, pp. 139-158.

Smith, S.M.; Corbet, P.S. (1975): Observations on reproductive biology of Aedes (Ochlerotatus) fryeri (Theo) (Diptera, Culicidae). Bulletin of Entomological Research 65: 285-?.

Trimble, R.M.; Corbet, P.S. (1975): Laboratory colonization of Toxorhynchites rutilus-septentrionalis (Diptera – Culiciae). Annals of the Entomological Society of America 68: 217-219.

Williams MC, Woodall JP.; Corbet, P.S. (1965): Nyando virus: a hitherto undescribed virus isolated from Anopheles funestus Giles collected in Kenya. Archiv Gesamte Virusforsch. 15: 422-427.

Williams, M.C.; Woodall, J.P.; Corbet, P.S.; Gillett, J.D. (1965): O'Nyong-Nyong fever: an epidemic virus disease in East Africa. 8. Virus isolations from Anopheles mosquitoes. Trans. R. Soc. Trop. Med. Hyg. 59: 300-306.

Woodall, J.P.; Gillett, J.D.; Corbet, P.S.; Weinbren, M.P.; Williams, M.C. (1961): The isolation of West Nile virus from the bird-biting mosquito Mansonia metallica in Uganda. Ann. Trop. Med. Parasitol. 55: 398-402.

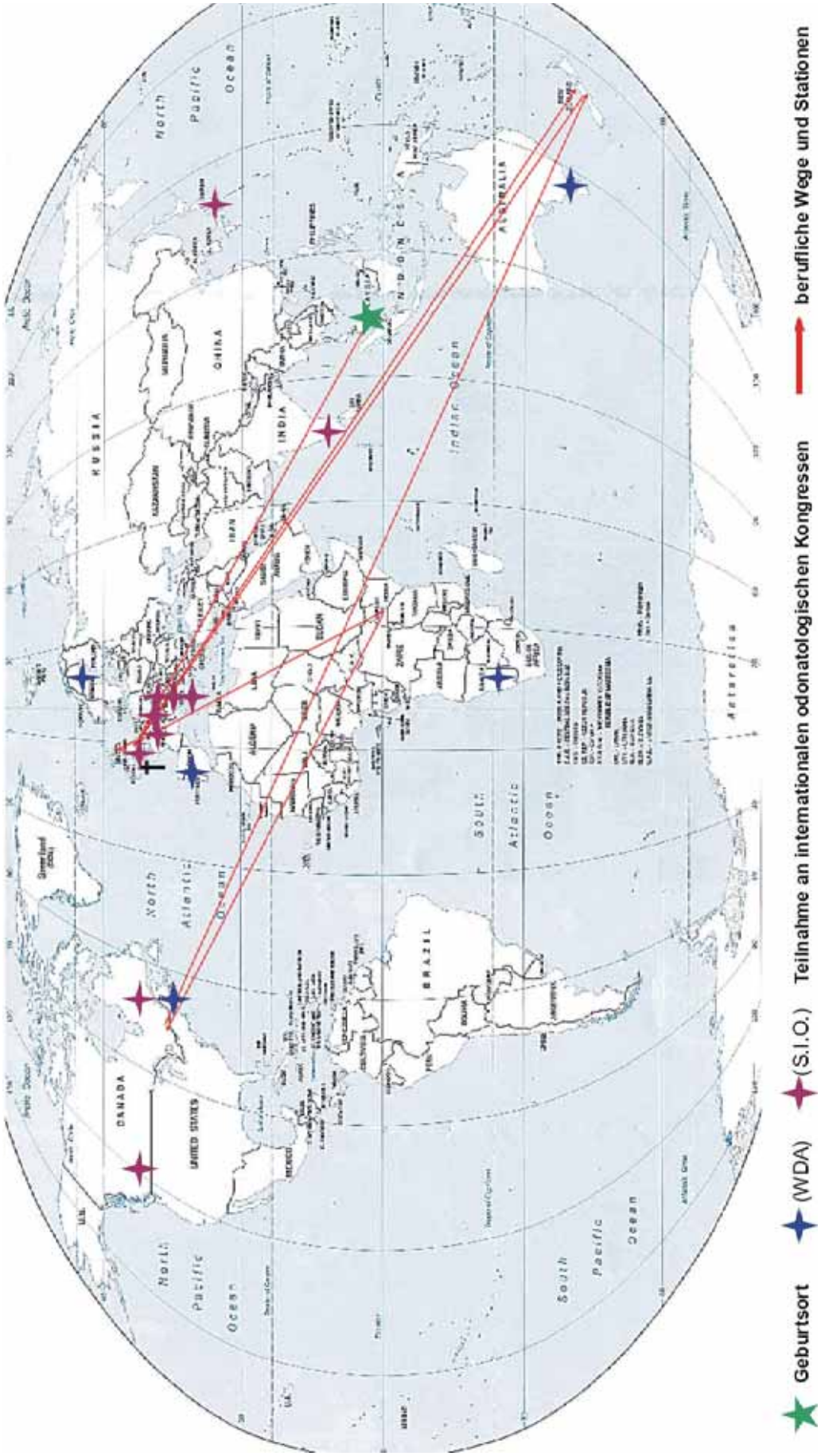
Woodall, J.P.; Williams, M.C.; Corbet, P.S.; Haddow, A.J. (1964): The isolation of Sindbis virus from the mosquito Mansonia (Coquillettidia) fuscopennata (Theobald) in Uganda. Ann. trop. Med. Parasit. 58(4): 383-389.

Autoren:
Joachim Hoffmann, Haldesdorfer Str. 21, 22179 Hamburg,
Deutschland. E-mail: hoffmann.joa@t-online.de
Martin Schorr, Schulstr. 7B, 54314 Zerf, Deutschland.
E-mail: bierschorr@online.de

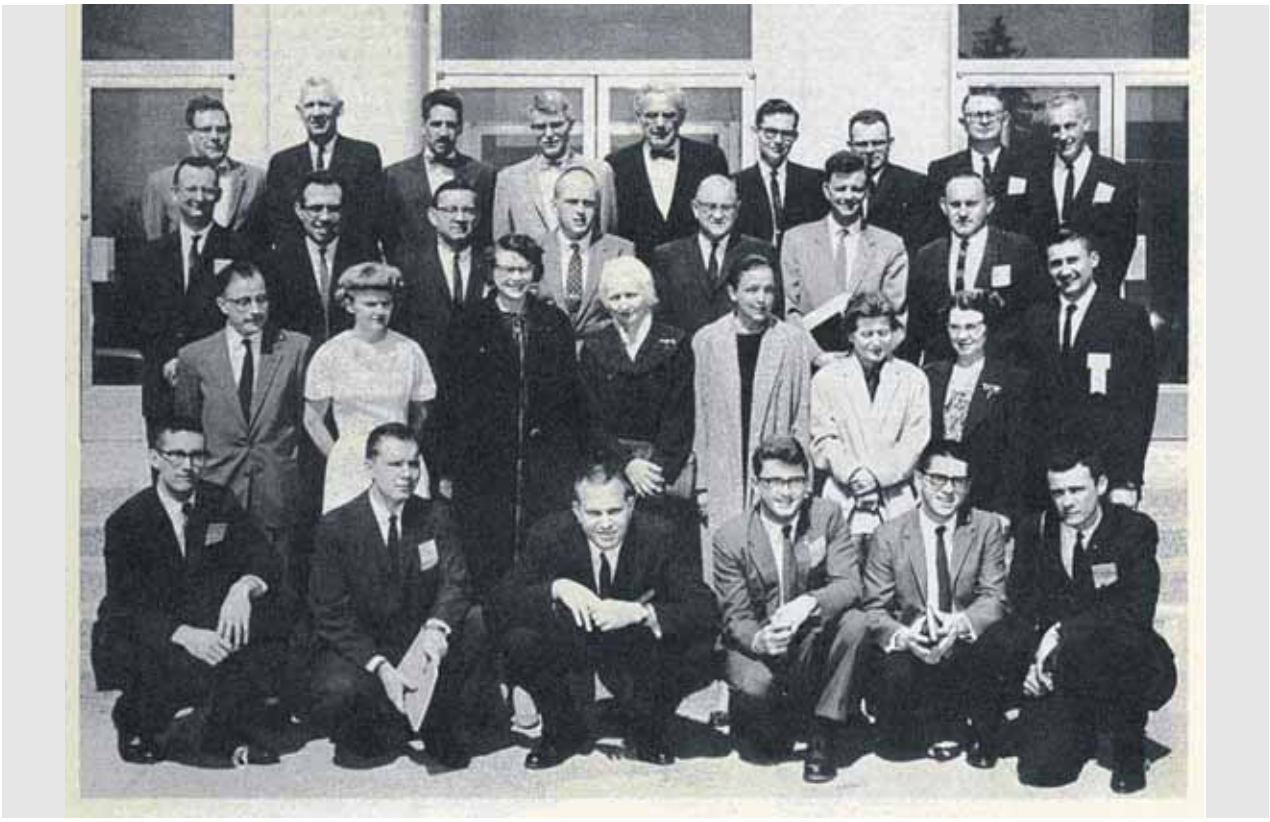
Zeittafel

wichtige Ereignisse	beruflicher Lebensweg	odonatologisches Wirken
	2008 am 13. Februar 2008 verstorben in Truro, England	sein letztes Buch „Dragonflies", das er gemeinsam mit Stephen Brooks verfasste, erscheint nach seinem Tod im Mai 2008
	1996 - 2008 England: seit 1996 endgültig Pensionär mit Wohnsitz in Crean, Cornwall	1999 erscheint das Standardwerk „Dragonflies: Behaviour and Ecology of Odonata"
2000	1990 – 96 Schottland: 1990 – 96 Honorarprofessor für Entomologie an der Universität von Edinburgh	seit 1997 Ehrenmitglied der 'Société Française d'Odonatologie' 1995 Gründungsmitglied der 'WDA'
1990	1980 – 90 Schottland: 1980 – 90 Prof. für Zoologie an der Universität von Dundee (ab 1990 Emeritus)	seit 1991 Ehrenmitglied der 'British Dragonfly Society'
Tod der Mutter Irene Corbet† dritte Eheschließung 1987	1979 – 80 England: 1979 – 80 Gastprofessur an der Universität von Cambridge	1983 Gründungsmitglied der 'British Dragonfly Society' und deren Präsident
zweite Eheschließung 1980 Geburt der Tochter Katarina Corbet (aus zweiter Ehe)	1980	1974 – 79 Neuseeland: 1974 – 79 Direktor desJoint Centre for Environmental Studies u. Prof. am Lincoln Agricultural College, Canterbury 1974 – 78 Prof. f. Zool. an der Universität von Canterbury
1970	1962 – 74 Kanada: 1962 – 67 Entomology Research Institute in Ottawa 1967 – 71 D irektor des Canada Department of Agriculture Research Institute in Belleville 1971 – 74 Professor für Biologie an der Waterloo University in Ontario	
9. Okt. 1962 Unabhängigkeit Uganda	1962 – erscheint sein Buch „A Biology of Dragonflies"	
erste Eheschließung 1957 1. Jan. 1957 Unabhängigkeit Malaysia	1960	1954 – 62 Uganda: 1954 – 57 East African Freshwater Fisheries Research Organisation in Jinja 1957 – 62 East African Virus Re search Institute in Entebbe
	1960 gemeinsam mit Cynthia Longfield u. Norman W. Moore das erste Standardwerk „Dragonflies"	
	1949 – 53 England: 1945 – 46 Dauntsey's School, Wiltshire, England 1946 – 50 Reading University 1950 – 53 Gonville and Caius College, Cambridge; Promotion bei Prof. Wigglesworth	
1950	1953 wird seine Doktorarbeit „The seasonal ecology of dragonflies" veröffentlicht	
Tod des Vaters Alexander S. Corbet†		
8. Mai 1945 Ende 2. Weltkrieg 2. Sept. 1945 Ende Pazifik Krieg 7. Dez. 1941 Beginn Pazifik Krieg 3. Sept. 1939 Beginn 2. Weltkrieg	1941 – 45 Neuseeland: 1941 – 49 Schulbesuch des Nelson Boys' College in Nelson	
1940	1931 – 40 England: von 1931 bis 1940 Kindheit und Einschulung in Reading, England	
1930		
	1929 am 21. Mai 1929 geboren in Kuala Lumpur, Malaysia	

Der Weltbürger Philip S. Corbet - internationale Stationen seiner beruflichen und odonatologischen Tätigkeiten



Fotogalerie



Teilnehmer des von B. E. Montgomery organisierten ersten amerikanischen Odonatologen Symposium 1963 in Lafayette (Indiana, USA) *Foto: George Beatty*
Vordere Reihe (L-R): Harold B. White III, James K. Ettman, R. Duncan Cuyler, J.A.L. Watson, William Lease, Charles N. Boehms. - Zweite Reihe (L-R): Merle E. Jacobs, Neva L. Currie, Emilie J. Alward, Leonora K. Gloyd, Alice Ferguson Beatty, Juanda C. Bick, Mary Davis Ries. - Dritte Reihe (L-R): Thomas W. Donnelly, Robert W. Alrutz, Minter J. Westfall, Jr., Oliver B. Flint, B. Elwood Montgomery, Phillip S. Corbet, CHarles E. Jenner, Jerry M. Macklin. - Hintere Reihe (L-R): Carsten Ahrens, George H. Bick, George H. Beatty, Donald J. Borror, Paul D. Harwood, C.Lifford Johnson, Robert B. Cummings, Paul Lutz, George Eller.

Philip Corbet am 26. Juli 1985 im Moor von Dykehead, Angus, Schottland *Foto: Harold White*

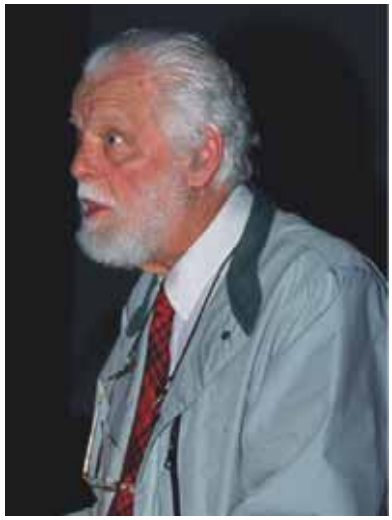
Während des XI. Symposium der S.I.O. 1991 in Trevi, Italien; links im Gepräch mit Carlo Utzeri und Michael Parr, rechts beim taditionellen "toasten" mit Carlo Utzeri während des S.I.O.-Dinners *Fotos: Werner Piper*

Während des XII. Symposium der S.I.O. 1993 in Osaka, Japan; links Hidenori Ubukata
Foto: N. N.

Philip S. Corbet gemeinsam mit seiner damaligen Lebensgefährtin Frieda Tchaikosky zu Besuch in Stelzenberg bei Jürgen Ott im März 1994
Foto: Jürgen Ott

Während des 1. European Dragonfly Workshop im Februar 1999 auf Gut Sunder, Meissendorf *Foto: N. N.*

Während des 1. WDA Symposium 1999 in Hamilton, New York, USA; links zusammen mit seiner Lebensgefährtin Sarah Jewell *Fotos: Werner Piper u.John Hubbard*



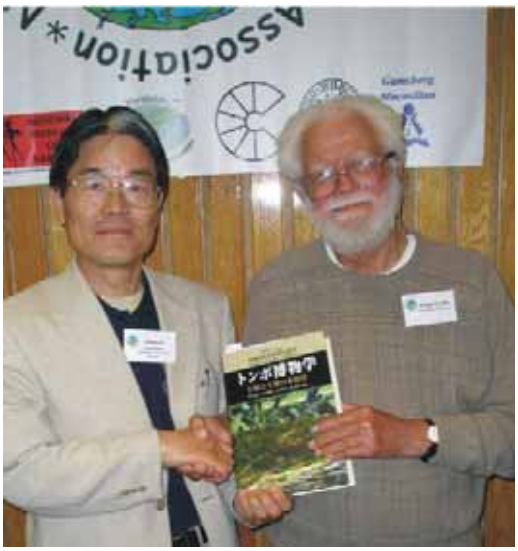
Während des 2. WDA Symposium 2001 in Gällivare, Schweden; links im Gespräch mit Jill Silsby *Fotos: Hidenori Ubukata and Reinhard Joedicke*

Während des 3. WDA Symposium 2003 in Beechworth, Australien
Foto: Reiko Watanabe

Während des 4. WDA Symposium 2005 in Pontevedra, Spanien *Fotos: Joachim Hoffmann*

Während der Tagung der SFA (Société Française d´Odonatologie) 2005 in Frankreich
Fotos: Jürgen Ott

Philip Corbet und seine letzte Lebensgefährtin Sarah Jewell in Swakopmund, Namibia, während des 5. WDA-Symposium im April 2007
Foto: John C. Abbott



Überreichung der japanischen Edition seines Buches an Philip Corbet durch Hidenori Ubukata während des 5. WDA Symposium in Swakopmund, Namibia, April 2007
Foto: N. N

Eines der letzten Fotos von Philip S. Corbet aus dem August 2007
Foto: N. N.

St. Uny's Kirche in Lelant, UK; hier fand am 25. Februar 2008 die Trauerfeier statt.

Wir danken John C. Abbott, Thomas W. Donnelly, Reinhard Jödicke, Jürgen Ott, Werner Pieper, Klaus Reinhardt und Harold White für die Bereitstellung von Informationen und Fotos. Unser ganz spezieller Dank gilt Sarah A. Corbet, die uns nicht nur Fotos und Informationen aus dem Leben ihres Bruders zur Verfügung stellte, sondern auch kritisch auf Fehler im Manuskript hinwies.

Vorbemerkung

Als stark an Libellen interessierte Menschen haben die meisten von uns – möchte ich annehmen – Philip Corbet als Odonatologen wahrgenommen. Erst beim Zusammenstellen der Bibliographie fiel mir auf, in welch großem Ausmaß er als angewandter Entomologe publizistisch und selbstredend beruflich tätig war. Hiervon hatte ich dann nicht zuletzt wegen der Publikation zu Libellen als wirksamen Regulatoren von Moskitos in Trinkwasserzisternen in Birma eine kleine Vorstellung; diese Arbeit von Philip und Coautoren ist die wahrscheinlich wichtigste, um nachzuweisen, dass Libellen auch einen "unmittelbaren ökonomischen oder gesellschaftspolitischen Wert" haben. Richtig eingesetzt, sind Libellen tatsächlich wirksame und kostengünstige Helfer im Kampf gegen Malaria. Es waren aber gerade gesellschaftspolitische Motivation und Engagement von Philip Corbet, die ich überhaupt nicht wahrgenommen hatte, solange ich ihm unmittelbar begegnet bin. Immer haben wir von Libellen gesprochen, immer hat er unsere Meinung erfragt. Wie so oft, nahm man bei Philip Corbet nur die Seite wahr, die von unmittelbarem Interesse war. Dass er eine äußerst facettenreiche Persönlichkeit war, konnte man erahnen. Eine Facette, die den wenigsten Odonatologen bekannt sein dürfte, stellt sein Engagement in bevölkerungspolitischen Fragen dar. Aus diesem Grund veröffentlichen wir einen Vortrag von Philip, den er am 16. Oktober 2007 in Chasewater, Cornwall gehalten und mit Stand vom 21. Okober 2007 dezidiert ausgearbeitet hatte (vgl. http://www.cornwallhumanists.org.uk/humpop4.doc). Da zu befürchten steht, dass dieser Vortrag dann doch einmal in den Weiten des World Wide Web verloren gehen wird, haben wir uns entschlossen, ihn in dieser Ausgabe des IDF-Reports zu dokumentieren. Er gibt uns Lesern die Gelegenheit, mehr über Philip zu erfahren, einmal indem er selbst darstellt, welchen Impetus das Thema Bevölkerungspolitik seinem Leben gegeben hat und indem er wichtige Stationen seines Lebens selbst schildert.

Martin Schorr, 03.05.2008

Population Matters (very much indeed)

Philip S. Corbet †

Introduction

I ask your indulgence this evening if I read most of this talk. I do this to preserve the continuity of ideas and because I cannot reliably remember all the dates and quotations I shall be including. Also, to economise on time, I shall be presenting my interpretation of the human predicament as though it is the only one, but this is to save time. I shall be emphasising the almost universal importance of carrying capacity in population-related matters, but I am conscious of the warning attributed to Epicurus (341-270 BC) that one should beware of trying to attribute all phenomena to a single cause! This talk will be presented in six sections:

- Carrying capacity.
- How did we reach our present position?
- Chronology of awareness of overpopulation.
- My own involvement.
- Prospects.
- Conclusions.

1. Carrying capacity

I am a qualified zoologist, specialising in ecology. My professional career has been in entomological research – pure and applied – in research management; and in teaching, research and management at university level, in Uganda, Canada, New Zealand and the United Kingdom. In all these activities I have had to be aware of the ecological principle of carrying capacity. This principle states that, for any resource base (usually an area of land or sea) there is a maximum number of individuals of a given species that can be supported there on a sustainable basis. By definition, if this number is exceeded, the numbers soon fall back to the carrying capacity, or below it, while the resource base and the animal population recover (if possible) from the stresses that they have endured by the imbalance that has been experienced. Or it may be that, after a population exceeds its carrying capacity, a new equilibrium is established, charac-

terised by a lower population and a lower carrying capacity. When the numbers of a species are increasing rapidly, and as the carrying capacity is approached, certain compensatory effects start to operate. Typically these are:

- Depletion of the essential resource base.
- Famine.
- Disease.
- Intraspecific conflict.

These consequences of overpopulation are well known in non-human animal populations; but what is seldom acknowledged is that human populations are no exception. Because the numbers of Homo sapiens are increasing geometrically, and because our species depends on a finite resource base, it is obvious that our populations, if not already doing so, will very soon experience these compensatory effects. Indeed, unless humans recognise this and plan accordingly, their populations will be liable to experience, with increasing severity, the effects of exceeding their carrying capacity. In such ways are all animal populations adjusted to their carrying capacity under natural conditions. Food and space have special significance for adjusting the size of a population, although other factors may play a role. Factors involved include:

- Availability of food – its quantity and quality.
- Frequency of encounters with other individuals (a measure of stress)
- Level of pollution of living space by the products or artefacts of other individuals, and
- Accessibility of sites for reproduction.

Almost all animals have evolved behavioural traits that counter these consequences of overpopulation, and humans are no exception. However, expression of these traits lowers the quality of life for all individuals and often lowers the birth rate and post-natal survival rate as well. In the case of human populations we already see these consequences expressed in increased incidence of famine, pestilence and war, all of which we claim that we wish to minimise. In short, such consequences reduce our quality of life, which leads to one definition of an optimum population for man, namely:

"the maximum number that can be maintained indefinitely without detriment to the health of individuals, from pollution or from social or nutritional stress."

In my opinion this definition is flawed in a way that reveals a weakness in human nature. Why, for goodness' sake, should the optimum population have to be the maximum number? I sense the not-too-subtle influence of mainstream economists here, and their commitment to growth. Another reason for specifying the maximum is, I suggest, that natural selection has endowed humans with the urge to produce as many offspring as possible. In this respect, knowing what we do about the merits of stabilising our population, we are still struggling against the incubus of maximum reproduction, fixed on us in the course of evolution. (Sir Richard Southwood, in 1970, suggested, tongue in cheek, that this primeval urge to reproduce as fast as possible may equate to "original sin"!)

A term which is much used nowadays when human pressures on the environment are being discussed is 'Environmental Impact.' This concept is closely relevant to carrying capacity because, as a population grows, so does its Environmental Impact. It is agreed among ecologists (e.g. Ehrlich & Holdren 1971; Southwood 1972) that Environmental Impact (I) can be realistically defined as follows:

I = P x E x N

Where I is the environmental impact
P is the size of the human population
E is the amount of energy consumed per capita and
N is the proportion of this energy that is
(a) derived by modifying an ecosystem so that in future its production of energy will be less (e.g. resource depletion) and
(b) used for the production of materials that are not immediately and harmlessly recycled in the ecosystem (e.g. pollution).

This formula may appear rather weighty but it's actually straightforward. Recently some authors have chosen to express it in a slightly different way, as I = P x A x T, where A = affluence and T = technology, but the implications of both formulae are virtually identical.
Understanding this formula is absolutely central to any discussion of population size because it highlights the key role played by human numbers in determining the intensity of I and in acting as a multiplier for all the other terms, which express the nature and extent of resource consumption and their effects on the environment. So it highlights the inverse relationship between population size and the quality of life.

Today, people in the so-called 'developed nations' continue to use the earth's precious, finite resources in an almost frivolous way, by indulging in pastimes such as speedboat racing or using electric bread-knives. This led Kenneth Boulding (1966) to observe that:

"In the West, our desire to conquer nature often means simply that we diminish the probability of small inconveniences at the cost of increasing the probability of very large disasters."

The carrying capacity of man's environment has, since our hunter-gatherer days, increased greatly through technological change. This may have given some people the illusion that such changes can somehow lessen the effects of intra-specific stress and aggressive behaviour. Ironically, however, our greatly increased density has obliged a higher and higher proportion of us to live tightly packed in huge conurbations where the inhabitants are becoming increasingly vulnerable to stress and face the increasing prospect of mass mortality from warfare and disease. Already we live in a world where intertribal and international belligerence are increasing, and where weapons of mass destruction are being contemplated as possible ways of resolving conflict. It is obvious that, as populations continue to grow on what is becoming a diminishing resource base, these symptoms can only become more pronounced.

2. How did we get to where we are today?

It is generally accepted that the earliest Homo sapiens existed as hunter-gatherers, living within the earth's carrying capacity. Since then, by the application of ingenuity, our species has raised the earth's carrying capacity (for humans) by exploiting portions of the biosphere that had been supporting other forms of life, or by tapping into its capital (as distinct from its income). These takeovers were accomplished by major cultural developments, prominent among which were:

- Control of fire and development of hafted weapons.
- Agriculture and pastoralism.
- Use of tokens for trade and the accumulation of monetary wealth.
- Hygiene and medicine.
- High-energy technology.

The control of fire enabled our hunter-gatherer ancestors to move into areas where winter would have been unendurable had they not learnt how to release, through wintertime combustion, supplies of solar energy stored in wood by summertime photosynthesis. This development increased the world's human population to perhaps 5 million, which can reasonably be regarded as the Earth's carrying capacity for Homo sapiens as a hunter-gatherer (Ehrlich 1985). Also, the development of hafted weapons will have made it possible for hunters to secure the healthiest prey animals instead of those most debilitated by parasites. This will have reduced infant mortality among humans from parasitic diseases. Next, discovery of techniques of plant cultivation and grain storage, about 10,000 years ago, enabled humans to appropriate for human food areas of land that would otherwise have been occupied by humanly inedible plants and the animals dependent on them. As a result, our species became about 50 times as numerous over the next ten thousand years (Ehrlich 1985). Agricultural man made further technological changes to agriculture that enabled him to increase the productivity of additional tracts of land, allowing him to boost his numbers still further – all at the expense of other species. All these developments had a significant impact on the environment, as did, of course, the resulting increase in human numbers. By 1775, shortly before the Industrial Revolution, the world population had increased massively, to perhaps 750 million (Bligh 2004; Ponting 2007).

Industrialisation was a breakthrough of a different kind. The resulting addition to the world population of about 1-2 billion people (Howard 1969) represented a clear case of overshoot. The 750 million or so that the earth supported by preindustrial agriculture may be an approximate measure of the earth's carrying capacity for man, simply as a result of displacement of competitors. Industrialisation enlarged the illusory (i.e. temporary) carrying capacity for humans by exploiting the planet's geological savings deposits in the form of coal and other fossil fuels. These energy-rich deposits are, as we know, the product of millions of years of photosynthesis and of course are not being replaced at anything like the rate at which they are being consumed. The rate at which we use up the earth's finite reserves of capital has now been accelerated by three other cultural developments: (1) the development of economics, based on the use of tokens and surplus food as a medium for trade; this led directly to the commitment to growth and the accumulation of wealth, measured by money, which encourages consumption rather than conservation; (2) the development of preventive medicine; which reduces the death-rate without making compensating adjustments to the birth-rate; and (3) the develop-

ment of a high-energy technology based on fossil fuels. We may note that these developments have all been extremely recent, having taken place in less than 1% of man's time on this planet. This has been too short a time to allow humans to make the cultural changes needed to deal with the huge transformation that has occurred in their interaction with the biosphere.

The biological equipment that humans have acquired through natural selection and brought to their present existence is that of the hunter-gatherer. Man is of course an animal, unique only in that he has recently (by the exercise of ingenuity) been able to free himself to a large extent from normal ecological control and from the processes of natural selection, but not from his evolved attributes or their consequences (Morris 1967).

As the product of natural selection, humans retain certain strong drives:

- The urge to reproduce and to maximise the number and fitness of their descendants;
- The drive to defend the land from which they derive their livelihood; and Tribalism, which drives them to be suspicious of, and belligerent towards, other potential competitors, be they tribes or nations, that might appropriate their resources.

These characteristics remain with us as biological norms and they do not provide a suitable recipe for living in harmony with other humans in an overpopulated world where competition for essential resources is acute and worsening. It's useless to debate the morality of our self-interest because we are programmed this way. Our natural tendency to reproduce, greatly in excess of survivability, is still the basic cause of tribal conflict and accordingly is a major source of human misery. Only when this is understood can we agree on population limitation and cease to quarrel over food-producing land. The only way out of this trap is to modify the expression of human instincts by the influences of reason and the resultant application of social constraints. On the other hand, if we are unable to overcome our servitude to uncritical genetic command, we must consider the possibility that we shall fail to rescue ourselves from ultimate self-destruction.

3. Chronology of awareness of overpopulation

Humans began seriously to overshoot their carrying capacity only at the dawn of the industrial era and it seems that the first formal recognition of this fact was when the much- maligned Thomas Malthus published his famous Essay on the Principle of Population (1798). Malthus was a distinguished mathematician and a Fellow of the Royal Society of London. Curiously, he was also a theologian (perhaps so that he could hold down a job!). Malthus pointed out that because, with unrestrained reproduction, human numbers increase geometrically, whereas food resources only ever increase arithmetically, in the absence of birth control humans will always outstrip their food supply, resulting in starvation and misery. Malthus insisted that he had reached this conclusion from applying reason, as distinct from emotion or wishful thinking, and that, in any case, it was intuitively obvious. There were, and still are, powerful vested interests in opposition to his conclusion, especially among mainstream economists, who advocate continual growth in order to boost the economy. It is also fashionable to discredit Malthus simply because widespread starvation did not immediately follow his pronouncement. An example is a recent statement by the journalist Andrew Marr (1998) who wrote:

"We all know that Malthus got it wrong. Malthus's explanation of the coming poverty, environmental decay and social collapse……has gone down as one of history's great failed predictions – not just wrong, but hilariously wrong."

Marr's statement, which one might call not just hilariously wrong, but sadly and pathetically wrong, is typical of commentators who follow the fashionable trend without the application of reason. Those wishing to discredit Malthus derived strength from the fact that the famines he predicted did not occur promptly, or at least not in countries his critics were concerned about. This was not because Malthus was wrong, but only because the world's food supply increased enormously, in a manner that could not have been foreseen, partly as a result of the cultivation of new land, for example in the Americas and Australia, and partly as a result of improved technology. In the longer term, and today for instance (when there is widespread poverty in the world), Malthus was of course absolutely right, and it's a great pity this was not recognised sooner. Instead, for at least 200 years it proved fashionable to dismiss what he said. Of course there were distinguished exceptions. As the Committee on Resources and Man of the U.S. National Academy of Sciences and National Research Council (Cloud 1969) put it:

"The Malthusian limits are more likely to be extended by recognising their validity and doing something about them than by uninformed ridicule."

Indeed, the Committee's leading recommendation for general policy was:

"That efforts to limit population increase in the nation and the world be intensified by whatever means are practicable, working towards a goal of zero rate of growth by the end of the century."

Their amplifying comment was that:

"population control is the absolute primary essential without which all other efforts are nullified."

Contemplating the present laissez-faire attitude in the United States towards population growth, it is difficult to believe that this recommendation was ever made.

I may have overlooked some allusions to the need for a population policy in Britain, but the next noteworthy event known to me is the publication of the satirical novel, Brave New World, by Aldous Huxley (1932) where he postulated a surreal society in which the imbalance between human numbers in relation to natural resources had been resolved by the existence of an all-powerful totalitarian state. In his sequel, Brave New World Revisited, Huxley (1959) made overpopulation his central theme, expanding on the urgency of addressing it if societies were going to retain any prospect of avoiding severely restrictive regimes. He stressed that man faced a "double crisis", identifying the imbalance between the world population and the available food supplies as the fundamental issue that underlies all the better-recognised social and political considerations, and the effects of which will inevitably lead to widespread loss of individual freedoms. A few years earlier the UK Government, perhaps in a fit of absent-mindedness, had established the Royal Commission on Population which recommended in 1949: (1) that our numbers should be stabilized; and (2) that the Government should make an official body responsible for maintaining a continuous watch over population movements and their bearing on national policies. The Commission noted also: first, that it would be impossible for any policy to be neutral because over a wide range of affairs, policy and administration have a continuous influence on family size, and second, that the control by men and

women over the numbers of their offspring is one of the first conditions of their own and the community's welfare.

Had the Commission's recommendations been heeded and implemented, we might be living in a very different country today. But all were ignored, and no action was taken. The Labour MP, Douglas Houghton, remarked (1970) that political parties fight shy of these matters and find them extremely distasteful. Such matters, he said, are bad for party unity and are supposedly vote losers. Houghton noted further that in 40 years the Labour Party had debated birth control only twice, in 1927 and 1940; and the Conservative Party not at all. Perhaps it need not surprise us that, almost immediately after Mr Houghton had made these statements, the Labour Party dissociated itself from his remarks. This denial persists: in a recent article Jack Parsons, the author of Population versus liberty (1971) bewails the fact that: "The BBC has been systematically excluding virtually all material on the question of basic population policy."

In today's society the forces opposed to population limitation are nothing short of formidable. Ehrlich and Holdren (1969) identify them as follows:

"growth-minded economists and businessmen, ... nationalistic statesmen, ... zealous religious leaders and the myopic and well-fed of every description."

It is worth noting that in 1968 322 MPs signed a motion demanding that there be an official population policy. I understand, from an article by Jon Tinker (1969), that, in secret, some action was taken: evidently an interdepartmental committee of civil servants was set up to advise Government how legislative and administrative acts could be made to further a policy of population stabilization. Predictably, the existence of this committee was kept secret (though fortunately not from Jon Tinker!). So, apparently, has any outcome of their deliberations.

The World Population Congress, held under the auspices of the United Nations in 1954, reported that no policy could be agreed upon because some countries had 'doctrinal objections' to birth control. No prizes can be expected for guessing which countries these were! In the mid-70s I attended an International Conference on Population Matters in Wellington, New Zealand. There again, it was found impossible to achieve unanimity on the need for population limitation. One country that voted against any policy of population limitation was Argentina, whose delegate declared that her country wanted more people, not fewer!

The tradition of committed ostrich-like denial by the UK Government persists. It was only about three years ago that the then Home Secretary, David Blunkett, went on public record as declaring that there was "no limit to the number of people that Britain could accommodate." Such a statement must have been swiftly followed by Thomas Malthus and Aldous Huxley (among others) turning in their respective graves. Likewise, very recently, the former Prime Minister (Tony Blair) admitted that his Government had no policy on population (Jones ca 2005). Outside Government, however, there is overt concern that continued population growth will put enormous pressure on Britain's essential services (Randall 2007). I am reminded of Douglas Houghton's observation in 1970 that, to the British politician, "population increase in Britain is thought of as something to be provided for, not something to be stopped."

The distinguished economist, John Maynard Keynes, (1883-1946), addressed the matter of overpopulation by posing the following question:

"Is not a country overpopulated when its standards are lower than they would be if the numbers were fewer?"

I find Keynes' approach much more fruitful than trying to identify the 'optimum population'. In 1970 the Institute of Biology, commendably in my view, mounted a symposium under the title "The optimum population for Britain" (Taylor 1970). The contributions to the Symposium, from a distinguished slate of international speakers, were uniformly excellent, but I regretted the choice of the words 'optimum population' in the title. This is because, even at that time, the most urgent need by far was to achieve a reduction in Britain's population. To spend time and resources trying to identify (and agree upon) an optimum seemed to me to represent a serious distraction from what should have been the main objective. In a talk that I and a colleague gave in Canada soon after this Symposium (Corbet & Smith 1973), we illustrated this view by posing the following analogy. If a man is in a small rowing boat drifting towards the top of the Niagara Falls, his strategy should not be to try to calculate precisely where on the bank he wished to disembark but to devote all his energies to reaching the bank as soon as possible. And later, in 1977, I concluded an article thus:

"Time devoted to discussing whether this or that size of population is to be preferred is wasted time or worse".
"Our overwhelming priority is clearly to reduce the rate of increase and then the size of the population as soon as is humanly, humanely, possible."

The unorthodox economist, Kenneth Boulding, wrote in 1959 that

"without birth control, the equilibrium between resources and population is only maintainable by the misery of starvation and premature death, or by the human vice of genocide, as individuals, families or tribes (i.e. nations) seek to supply their own needs at any other individual's or tribe's expense."

Boulding saw three probable causes of lack of birth control:

1. Religious teachings.
2. The prevailing view that "God will provide."
3. The view that, as economies grow, the birth rate will fall (the so-called 'demographic transition.').

With regard to resource use, Boulding pointed out that mankind today lives in what can only be a brief phase of enjoying free access to the planet's capital – its rich but finite store of fossil sunlight. To have any chance of future stability, our policy should be to use this precious resource not in ways that make us increasingly reliant on it, but in ways that enable us to do without it. The planet's stocks of accessible fossil fuels cannot last much longer. Our present treatment of them can be likened to someone burning down his house in order to keep warm.

Ever-popular agricultural 'self-help' schemes are useless (except as conscience-relievers) unless accompanied by birth control (Hardin 1974; Corbet 2006; Duguid 2007). The food aid supplied through 'Band Aid' 20 years ago now has to be repeated annually, as populations continue to increase on an impoverished resource base. On the other hand, where women are effectively enfranchised and enabled to realise their preference for two or three children, there is a realistic prospect of stabilising or even reducing the population. Sadly this consideration seldom features in the agenda of aid charities, often because they fear that to do so will alienate donors. If suffering in undernourished populations is to be relieved, attention would be much better directed primarily towards the goal of reducing births.

A seminal essay by the biologist-philosopher Garrett Hardin appeared in 1968. It drew attention to the so-called 'Tragedy of the Commons' and its lesson for population limitation. Hardin pointed out that any resource to which all members of a community have free access will inevitably be destroyed because each

user puts his own short-term interest before that of the community, namely the sustainability of the resource. Hardin saw this principle as applying to man's urge to reproduce, and showed that, only by mutually agreed coercion (to limit family size), could overpopulation and resource destruction be averted. In this context he defined true freedom as the 'recognition of necessity.' Many years earlier, the philosopher Edmund Burke (1729-1797), a contemporary of Thomas Malthus, had put it this way:

"Men are qualified for civil liberty in exact proportion to their disposition to put moral chains upon their own appetites……Society cannot exist unless a controlling power upon will and appetite be placed somewhere, and the less there is of it within, the more there must be without. It is ordained in the eternal constitution of things that men of intemperate minds cannot be free. Their passions forge their fetters."

And, more succinctly, in his Letter to the Sheriffs of Bristol:

"Liberty, too, must be limited in order to be possessed."

The take-home message from both Hardin and Burke is that a democracy is fundamentally unsuited to achieve population limitation.

In 1972 the journal The Ecologist devoted a whole number to its "Blueprint for Survival". This was a publishing milestone. Signed by several distinguished scientists, it laid out the path that Britain would be advised to follow if the consequences of overpopulation and resource depletion were to be avoided. Prominent among the measures it advocated was population limitation. The British 'Establishment' reacted promptly and angrily to the "Blueprint." John Maddox, the then Editor of the journal Nature, devoted an editorial to trying to discredit the "Blueprint" under the title "A case of hysteria" (Anon. 1972). Immediately after Maddox's diatribe had appeared, a letter signed by about 20 senior biologists appeared in The Times saying that they approved in principle of the "Blueprint" and had only withheld their signatures for trivial reasons. Maddox's editorial was not closely reasoned and merely accused the authors of the "Blueprint" of being "alarmist", which, for Maddox, seemed to be sufficient justification for ignoring the message they were trying to convey.

In 1966, the distinguished Australian immunologist and Nobel Laureate, Sir Macfarlane Burnet, when reflecting on man's treatment of the environment, remarked that:

"There are three imperatives: to reduce war to a minimum; to stabilize human population; and to prevent progressive destruction of the earth's irreplaceable resources."

Later, in 1970, he declared that:

"man suffers from a surfeit of knowledge and a deficiency of understanding."

He amplified this by saying that man lacks understanding of a few central notions that apply to his treatment of global resources.

Not long afterwards Chris O'Neill (1976), a sociologist, warned that "What's done now, or not done, must be lived with for a long time."

In 1989, the Duke of Edinburgh used the Dimbleby Lecture to highlight the effect that human numbers were having on the biosphere, speaking primarily as a conservationist, but also as someone concerned with what human population growth was doing to the biosphere. He said:

"In the end it is up to us as procreators, predators, manipulators, exploiters and consumers to realise that we have to live off the limited land of our planet."

and

"We have to learn to accept that any further growth in the human population.....[is] bound to cause very serious problems for the [future] generations"

And three years later, the Prince of Wales (1992) urged that the topic of runaway population growth should be seriously addressed and should find prominence on the agenda of the Earth Summit Conference in Rio.

In a refreshingly forthright interview earlier this year, Chris Rapley, the newly appointed Director of the Science Museum, chose to focus on the need for population stabilisation in Britain (Clover 2007). Rapley identified this as an issue that must be addressed although "no one will talk about it." In regard to the

matter of environmental impact, he stated that "the country needs fewer people, not greener ones!" He stressed that we face problems that will not be solved by technology alone, but only by a change in social attitudes.

From this abbreviated review of pronouncements on the population problem since Malthus had his say, I draw the following conclusions.

Man's powerful, innate drives towards unconstrained reproduction and resource consumption have led to a serious imbalance between the size of the human population and the ability of the biosphere to support it on a sustainable basis.
This imbalance, which grows more pronounced by the day, is already causing widespread hunger and premature death and can only result in the collapse, of numbers and of social order, if stern countermeasures are further postponed.
Although respected scientists and a few unorthodox economists have been publicising the need for countermeasures for at least 50 years, there is a widespread reluctance among society's leaders, including the Government, to address this issue and to formulate remedial action.
This being so, human society as we know it faces imminent destabilisation.

4. My own involvement

It was when I was a 23-year-old PhD student at the University of Cambridge in 1952 that my perception of the human condition underwent a sudden transformation and gave me a focus of intense concern that has remained with me ever since. In brief, I became acutely aware that the world's human population was increasing without control and that, unless governments acted robustly to check its increase, disaster lay ahead. What alerted me to this realisation was hearing on the radio the Presidential Address to the British Association for the Advancement of Science delivered by the distinguished biophysicist A.V. Hill under the title "The Ethical Dilemma of Science" (Hill 1952). The dilemma that Professor Hill identified was the morality of using science primarily to save lives when there were already so many people on the planet that famine and infant mortality were rife.

From that time onwards I resolved to try to publicise the fact of human overpopulation whenever opportunity offered. In practice, because people are so averse to discussing this matter, opportunity hardly ever did offer, until, that is,

I acquired what I would call a 'power base'. This happened when in 1967 I was appointed Director of a large agricultural research institute in Canada. I find this sad to relate, but I found that, while I held that position, what I said (e.g. in a committee or advisory group) was listened to because of my position, rather than because of what I said. This was a depressing realisation but I exploited it to the full. During the rest of my professional career I always had a power base of some kind and so was able to pursue my aim of publicising the need for a population policy. In committees I could do this by introducing a motion that would lead to action of some kind, or at least oblige other members to respond to a question which would then be recorded in the minutes of the meeting. The case for a population policy was so compelling, especially to biologists, that I often received support, even though none of my associates was willing to raise the matter independently. For example, in Canada I served as President of one of the largest scientific Societies in the country and from that position, via a motion passed by the Council and then at an Annual General Meeting, I arranged that an open letter be sent to the Canadian Government asking for its population policy to be stated and publicised (Corbet 1971). Interestingly, and significantly, there was only one dissenting member of the Society's Council. He was a Roman Catholic, and the obligatory member from the Province of Quebec. He may have feared for his prospects in the Hereafter! There were other opportunities: as a member of Council of the newly-formed Committee of Heads of Canadian University Biology Departments, I proposed that the first statement on the Committee's manifesto be to call for a national population policy. A general meeting supported this unanimously, which gave it strength. And in 1971, with a senior colleague, I orchestrated an open letter from 25 senior biologists to the Prime Minister (Corbet & Leroux 1972), asking that Canada formulate a national population policy. We received an answer (we had to!) but predictably it was a bland one which effectively sidelined the issue. These are only a few examples. Suffice to say, I used any opportunity that came my way to use my influence towards this end.

When in New Zealand, between 1974 and 1980, I had better opportunities to expose the issue of overpopulation. I jumped at the chance to direct a two-year MSc course in resource management that had been newly established there by the University of Canterbury and Lincoln Agricultural College. This was because the relationship between the numbers of people and New Zealand's carrying capacity is so straightforward. It can be easily explained in terms of the country's simple agricultural economy and its dependence on imported fossil fuels. Put simply, New Zealand depends on its agricultural production to earn the for-

eign exchange with which it purchases the fossil fuels which, in turn, it needs to underwrite its agriculture. This circular dependency, which is easy to grasp, shows that per-capita prosperity in New Zealand will diminish as its human population increases. I was able to raise the population issue in a number of forums, while serving on bodies such as the New Zealand Environmental Council, the newly-formed Demographic Society (which I helped to establish) and the New Zealand Club of Rome, and when making population the main topic for discussion at an annual conference of the New Zealand Mensa Association. Two incidents deserve mention. The first occurred within a few days of my arrival in the country. The United Nations was to hold a World Population Conference to address the topic of demography world-wide and had invited each nation to submit a position paper outlining its population policy. Wishing to participate, the New Zealand Government set up an Inter-Departmental Committee on Population Questions to prepare a paper for submission to the United Nations. This Committee invited submissions from the public, to be collated and summarised by the New Zealand Commission for the Environment. Of course I submitted a contribution; it included the recommendation that the New Zealand Government's policy should be to adopt

"measures to ensure that population size would become progressively adjusted to a level at which an acceptable standard of living and quality of life can be sustained for future generations with the resources available to New Zealand in the long term."

As it happened, I knew the Commissioner for the Environment well and I was aware that, although he was a civil servant, he was also a senior scientist who, predictably, shared my views on environmental concerns. Anyway, the Interdepartmental Committee must have allowed their attention to wander while preparing the final submission because my exact words appeared in the eventual position paper for New Zealand. So, thereafter, whenever I wished to advocate a population policy, I could honestly say that the official position of the New Zealand Government on the matter of a population policy "is as follows" and quote my own words! Another opportunity came when I was serving on a quango, the New Zealand Fact-Finding Group on Nuclear Power. This group, appointed to advise the New Zealand Government in 1975, comprised six members, plus support staff, and was chaired by the President of the Royal Society of New Zealand. Each member was assigned duties by the Chairman. When it came to producing the final Report, I was delighted to be given the task of writing the summary. This gave me the opportunity to stress the need for New

Zealand to live within its means, in other words to tailor demand to the resources available in the long term. I gave this statement prominence by putting it in a free-standing Epilogue at the end of the Report so that it would be the message that readers would take away with them. Of course a message like this was not what mainstream economists and members of the Establishment wanted to hear. As time passed, I began to think I had got away with it without having to defend my position when late one evening the Chairman 'phoned me at my home to say that the Epilogue would have to be changed. He tried to persuade me to water it down but I asked if instead I could come round to his home and talk about it. He graciously allowed me to do this and the upshot was that the statement remained in the final Report unchanged. I was gratified by this outcome because the Report (1977) was adopted by the New Zealand Government as the country's position statement on nuclear power.

I have mentioned a few selected examples of the opportunities that exist for advancing awareness about population matters if one can command a power base, however modest. However, the defence mechanisms of the establishment and governments are more than equal to any progress that individuals or quangos can make towards reform, and I have to say that, for all my efforts on this front, I have detected no change in national policy as a result. I think it will be clear from parts 3 and 4 of this talk how determined and effective governments can be when trying to block any discussion of the topic of population policy.

I have reviewed the attempts by individuals, and sometimes associations, to publicise the need for a population policy, and their consistent lack of success. This brings us to the present, in a world where the human population continues to increase and the inevitable consequences of this, namely pollution, famine and conflict, continue to worsen. It is now appropriate to examine the prospects that face the world's human population in 2007.

5. Prospects

I shall begin by quoting what Aldous Huxley, the author of "Brave New World", wrote in 1959. He said:

"Overpopulation is the grim background against which the drama is being played out. The choices are between famine, pestilence and war on the one

hand,
birth control on the other."

When one looks for any recognition of this scenario among governments during the intervening years, one encounters only a consistent resolve to ignore Huxley's warning. Indeed there are still influential people willing to dismiss such warnings as the utterances of so-called 'Doomsayers', evidently believing that merely to use this term will invalidate any warnings of impending catastrophe.

My own view comes close to the wry statement in a book by the American novelist, James Branch Cabell, published in 1926. He wrote:

"The optimist proclaims that we live in the best of all possible worlds, and the pessimist fears this is true."

When one reflects on the known consequences of a species exceeding its carrying capacity when there is no prospect of its avoiding these consequences, one has to face the fact that the environment we enjoy today, especially in a protected, privileged, resource-rich country like Britain, is anomalous and acutely temporary. We live in a world struggling under the burden of inequitable distribution of resources essential for survival and health. Today's human population is starkly partitioned between the 'haves' and the 'have-nots'. As we well know, the world's food resources nowadays go to those people who can afford them, not to those who most need them. This inequity originated in, and persists as a legacy of, the economic arrangements put in place by the western nations who, because of their advanced technology (Diamond 1997), were able to colonise Third-World countries, especially during the 18th and 19th Centuries. When contemplating or trying to maintain this inequity, we should be well advised to reflect that it is unlikely to persist unchallenged for long. As a species we have been programmed by natural selection to respond to resource shortage in ways that will swiftly increase the likelihood of civil disturbance, conflict and social unrest. As Bligh (2004) has pointed out, we have the latent ability to consider how best to serve mankind in perpetuity and not just how to serve ourselves during our own lifetimes. To do that, he says:

"we must strive to sustain and strengthen that thin veneer of humanity by which we seek to subdue our animal inheritances and ensure, to the best of our ability, that we leave the world in a fit state for our successors. The only way to stand any chance of achieving this is to institute birth control."

This is a pronouncement by a thoughtful expert whose only aim is to make a measured and sober prognosis of human prospects.

The question can be fairly put: given our biological inheritance, can we avoid ultimate self-destruction? The 'green' economist, Colin Price, writing in 1993, and contemplating the pattern of our resource depletion, predicted that:

"The human species is destined to have a very short tenure in the history of life on Earth because it cannot help but use up the energy resources that it evolved to exploit."

As I see it, although the time to avert disaster is now critically short, any hope that humankind has to do so depends absolutely on using our power of reason to suppress our instinctive behaviour. In other words, on marshalling the will to change our ways. As Robert Socolow has said (Kolbert 2007):

"Whether it's still practical depends on how much we give a damn."

In 2007, as I contemplate the human population's response to the need to arrest global warming (among other environmental threats), I see no convincing sign that we 'give a damn.' On the contrary, in matters of reproduction, resource consumption and production of waste products, our policy is 'BAU', or 'Business As Usual.' Elizabeth Kolbert (2007), after projecting existing trends towards climate change, and noting the failure of governments to act effectively towards mitigating or offsetting these trends, concludes by saying:

"It may seem impossible to imagine that a technologically advanced society could choose, in essence, to destroy itself, but that is what we are now in the process of doing."

Or, as Bligh (2004) speculates:

"Someone will visit the earth in a few million years and find that there were some intelligent beings who lived here for a while, but they just couldn't handle the transition from being hunter-gatherers to high technology."

6. Conclusion

I've reviewed the evidence that overpopulation is the most serious problem facing mankind. I shall end this talk by summarising the facts as I see them.

The integrity and stability of the biosphere – that delicate envelope around the planet on which all life depends – are under threat from the outbreak of the human population and the inevitable consequences of this, namely resource depletion, pollution and climate change. These impacts are merely symptoms of one primary cause – overpopulation. Although the destructive effects of unrestrained population growth were clearly enunciated more than 200 years ago, and although many respected advocates have urged, in the intervening years, that remedial policies be put in place for reducing population growth, the appointed leaders of almost all nations have steadfastly refused to recognise or address the problem, even though it is clear that, the longer action is delayed, the worse the ensuing crisis will be, and the more draconian any countermeasures will have to be.

The (sustainable) carrying capacity of the biosphere for humans is probably less than 1 billion, this being the approximate size of the population just before the Industrial Revolution. Since then the human population has increased geometrically, to reach about 6.5 billion, a situation powered by the instinctive urge to reproduce, and exacerbated by adoption of a high-energy technology that has greatly increased the effectiveness of food production, disease prevention and death control, as well as the rate of resource consumption and pollution. Those developments have relied to a huge extent on access to the planet's finite stock of fossilised sunlight, accumulated over many millions of years. Despite our almost total dependence on these reserves, their exhaustion is now in sight, whereas virtually no contingency plans exist to maintain our present way of life without them. As with the need to arrest population growth, governments are not developing effective ways of managing modern civilisations without a massive subsidy from fossil fuels.

A continuing feature of human civilisation is the very inequitable distribution of resources, a situation maintained and exacerbated by commitment to economic goals based on the manipulation of money. In practice this results in the planet's resources, including food, flowing primarily to people who can afford them, rather than to those who most need them – a legacy from the economic arrangements put in place and imposed by the more technologically

advanced, colonizing nations two to three Centuries ago (Diamond 1997; Ponting 2007).

The insatiable thirst for economic growth and the acquisition of wealth continually exacerbate the effects of population growth, bringing ever closer the time when the symptoms of overpopulation will cause collapse of civilisations as we know them. These symptoms include global warming (causing desertification and rising sea levels), widespread famine, premature mortality, pestilence, and civil and international conflict.

In their steadfast refusal to address the problem of overpopulation, mankind's so-called leaders have exhibited stupidity, timidity or denial, or a combination of these failings. Because only they can generate the coercive policies needed to limit population growth, by their neglect these individuals will have denied future generations the opportunity to enjoy a fruitful existence, having enriched themselves at their descendants' expense. The ethics of our present state are well described by Catton (1976) when he remarks that:

"Our numbers and our technology have locked us into stealing from the future."

Epilogue

These are undoubtedly very dismal prognoses. Remedial action has been postponed for so long that, whatever action is now taken, it will be impossible to avoid, at the worst, universal chaos, and, at the best, draconian curbs on individual freedoms under totalitarian regimes. Nevertheless, even at this late stage, there may be ways of mitigating this grim scenario and perhaps of salvaging some of our self-respect.

It is clear that a democratic system is not equipped to devise and implement policies involving curbs on individual freedoms, such as reproduction or resource consumption. This being so, a way forward might be for all political parties in each country to be persuaded that, for the sake of human civilisation, they must form a coalition (as in wartime) and act in concert on the issues of overpopulation and climate change. The only route by which I could see this happening in Britain (remotely unlikely though it may be) is for the President of the Royal Society of London, with the unanimous support of the Fellowship, to

convince Government of the gravity and urgency of the need, and to request that they adopt this course.

Small though the chances of success might be, I cannot see continued inaction as a moral alternative for people who take seriously their obligations to future generations.

Sources

Anon. (1972). Editorial. Nature, London: 14 January.

Bligh, J. (2004). The fatal inheritance. Athena Press, London.

Boulding, K. E. (1959). Malthus on population. University of Chicago.

Boulding, K.E. (1966). The economics of the coming spaceship Earth. In "Environmental quality in a growing economy", Jarrett, H. (ed.), Johns Hopkins Press, Baltimore, p.14.

Cabell, J.B. (1926). The silver stallion. McBride & Co., New York.

Catton. W.H. (1976). Can irrupting man remain human? BioScience 26: 262-267.

Cloud, P. (ed.) (1969). Resources and man. Freeman, San Fancisco.

Clover, C. (2007). We need fewer people, not greener ones. (Interview with Chris Rapley). The Daily Telegraph 24 July: 29.

Corbet, P.S. (1971). Population and resources: a policy for Canada. Science Forum, University of Toronto Press 4(3): 6-8.

Corbet, P.S. (1977). Population: a biological approach. Ontario Naturalist 17(1): 26-30.

Corbet, P.S. (2006). World's poor need real help. Letter to Editor. The Times, 28 November, p.18.

Corbet, P.S. & Leroux, E.J. (1972). The population problem: a vital Canadian policy issue. Science Forum, University of Toronto Press 5(1): inside front and back covers.

Corbet, P.S. & Smith, S.M. (1973). A population policy for Canada: a biologist's view of the priorities. In "A population policy for Canada? pp. 27-29. Conservation Council of Ontario and the Family Planning Federation of Canada, Toronto.

Diamond, J. (1997). Guns, germs and steel. Jonathan Cape, London.

Duguid, J. (2007). Aid that worsens poverty. Jackdaw 10: 11-12.

Duke of Edinburgh (1989). Living off the land. Listener, 9 March, pp.4-7.

Ecologist, The (1972). A blueprint for survival. The Ecologist 2: 1-42.

Ehrlich, A. (1985). The human population: size and dynamics. American Zoologist 25: 395-406.

Ehrlich, P.R. & Holdren, J.P. (1969). Population and panaceas. A technological perspective. BioScience 19: 1065-1072.

Ehrlich, P.R. & Holdren, J.P. (1971). Impact of population growth. Science 171: 1212-1217.

Fact-Finding Group on Nuclear Power (1977). Report to the New Zealand Government. Keating, Wellington.

Grant, L. (2007). Valedistory: the age of overshoot. Negative Population Growth, Alexandria, Virginia, USA.

Hardin, G. (1968). The Tragedy of the Commons. Science 162: 1243-1248.

Hardin, G. (1974). Living on a lifeboat. BioScience 24: 561-568.

Hill, A.V. (1952). The ethical dilemma of science. Nature, London 170: 388-393.

Houghton, A.L.N.D. (1970). The legislation barrier. In Taylor, L.R. (ed.), The optimum population for Britain, pp.117-126. Academic Press, London.

Howard, W.E. (1969). The population crisis is here now. BioScience 19: 779-784.

Hubbert, M.K. (1969). Energy resources. In Cloud, P. (ed.), Resources and man, pp. 157-242. Freeman, San Francisco.

Huxley, A. (1932). Brave new world. Chatto & Windus, London.

Huxley, A. (1959). Brave New World revisited. Chatto & Windus, London.

Jones, G. (ca 2005). Blair admits he has no policy on population. The Daily Telegraph.

Kolbert, E. (2007). Field notes from a catastrophe. A frontline report on climate change. Bloomsbury, London.

Macfarlane Burnet, F. (1966). Ecology and the appreciation of life. The Boyer Lectures, Australian Broadcasting Commission, Ambassador Press, Sydney.

Macfarlane Burnet, F. (1970). Dominant mammal. Penguin Books, Blackburn, Victoria.

Malthus, T. (1798). An essay on the principle of population. London.

Marr, A. (1998). The Observer, London. 6 September.

Morris, D. (1967). The naked ape. Jonathan Cape, London.

New Zealand Inter-Departmental Committee on Population Questions (1975). Report. Government Printer, Wellington.

O'Neill, C.J. (1976). Towards a population policy for New Zealand. New Zealand Demographic Society Conference, Wellington. 22 pp.

Parsons, J. (1971). Population versus liberty. Pemberton Books, London.

Pearce, F. (2007). The last generation. Transworld Publishers, Uxbridge.

Ponting, C. (2007). A new green history of the world. Vintage Books, London.

Price, C. (1993). Time, discounting and value. Blackwell, Oxford.

Prince of Wales (1992). Gloomy topics we cannot afford to ignore. The Times, 23 April.

Randall, J. (2007). It's not racist to worry about an imported population boom. The Daily Telegraph, 1 June.

Southwood, T.R.E. (1970). The natural and manipulated control of animal populations. In Taylor, L.R. (ed.), The optimum population for Britain, pp.87-102. Academic Press, London.

Southwood, T.R.E. (1972). The environmental complaint – its cause, prognosis and treatment. Biologist 19: 85=94.

Taylor, L.R. (ed.) (1970). The optimum population for Britain. Institute of Biology Symposium 19. Academic Press, London.

Tinker, J. (1969). Man as epidemic. New Scientist, 2 October: 18-19.