



<https://doi.org/10.11646/palaeontomology.4.4.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:103EB657-EED0-4D1C-A7E6-B8A7FD51FE3B>

International Palaeoentomological Society—20 years after

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Fossilised insects probably brought man's attention since the prehistory, since first amber with an insect entombed in resin was found. Amber was collected and used by humans first in the Upper Paleolithic period, perhaps as long ago as 20,000 years (Beck *et al.*, 2009; Burdukiewicz, 2009; Płonka & Kowalski, 2017). The written testimonies on amber inclusions goes back to Ancient Rome (Plinius Secundus, 77). During 17th and 18th centuries the inclusions in amber were noted by philosophers (Bacon, 1638), their values discussed and illustrated (*e.g.*, Sendel, 1742) and their importance to understanding the history of life pointed (Kant *in* Hagen, 1821). Shortly after Linnaeus "Systema Naturae" editions, the first research using binomial names for insect included in the copal was published (Bloch, 1776) and Pleistocene record of Recent beetle was noted by Fabricius (1775). Notes and information on fossil insects from imprints and amber were presented by Lang (1708), Bertrand (1763), Linnaeus (1778) and Volta (1796). The first regular description of beetle inclusion in Baltic amber came from Gravenhorst (1806) and works of de Serres (1828, 1829) seems to be the first with more detailed overview and description of insects as adpression fossils. Therefore, human's palaeoentomological interests predates official beginning of modern taxonomy and palaeoentomology as science is as old as modern entomology (Azar *et al.*, 2018).

With this deep background, the researchers on fossil insects in the beginning of palaeoentomological studies worked also with the Recent ones, later the studies on fossil insects became in scope of geologists and palaeontologists (Smith *et al.*, 1973; Rasnitsyn, 2002, 2008). If the scientific societies begun to be operating in 17th and 18th centuries (The Royal Society of London for Improving Natural Knowledge established in 1660; Aurelian Society in London established somewhere 1740–1742) (Osborn, 1952), with the 19th century societies (*e.g.*, the oldest ones: Société Entomologique de France, Linnean Society of London, Royal Entomological

Society in London, American Entomological Society) also palaeoentomologists took a part and added much towards the development of the science.

Statement by Imms (1931)—“Recent advances in insect paleontology have, to a marked degree, filled in conspicuous gaps in our knowledge of the evolution of most of the main orders, but we are still faced with want of direct evidence from fossils with regard to the two most important problems of insect phylogeny, *viz.*: the origin of insects as a class, and the origin of wings”—is still valid and palaeoentomologists still face these challenges. With development of palaeoentomological studies, and renewal of interest on fossil insects at the end of 20th century, several initiatives and activities led to the formation of International Palaeoentomological Society (IPS) in 2001. In fact, the roots of IPS reach more deep, with the initial meeting of “Fossil insects” section of Polish Entomological Society in 19th April, 1985 (renamed to Palaeoentomological Section in 2005) and first issue of “WrosteK” edited and published by Professor Jan Koteja in 1985 (Krzemiński, 2005). With 7th issue in 1988 the bulletin received the title—“Inclusion/WrosteK” (Fig. 1). The annual meetings of the section gathered Colleagues from Poland, but also from abroad, and the information presented in the bulletin became worldwide. In November 1994, a meeting between Dr. André Nel, Dr. Xavier Martínez-Delclòs and Prof. Jean-Claude Gall in Reims, France, led to the origins of the Fossil Insects Network. The proposal submitted to the European Science Foundation in the autumn of 1995, considered the project to be very interesting and would receive the approval of the ESF Network Committee some months later (Martinez-Delclòs & Jarzembowski, 1997). First issue of another bulletin, edited by Xavier Delclòs—“Meganeura” appeared in 1997. The “Inclusion/WrosteK” was edited and published by Professor Koteja in 1985–2000, it was revived in 2005 by Dr. Elżbieta Sontag, who edited three subsequent issues, up to 2007. The “Meganeura” was published between 1997–1999, with only four issues (Fig. 1).



FIGURE 1. Headings of ‘pre-Palaeoentomology’ bulletins and journals of IPS, bulletin of Fossil Insects (Palaeoentomological) Section of Polish Entomological Society, Meganeura and Alavesia.

The meetings of palaeoentomologists (1998, the First Palaeoentomological Conference in Moscow) amber and inclusion researchers and enthusiasts (1998, First World Congress on Amber Inclusions in Vitoria-Gasteiz, Basque Country, Spain) and Gondwanan palaeoarthropodologists (2000, First International Meeting on Palaeoarthropodology was held in Ribeirão Preto, Brazil) put new impulses to development of palaeoentomology (Azar *et al.*, 2018; Szwedo & Solórzano Kraemer, 2019). Publication of special volume of “Estudios del Museo de Ciencias Naturales de Álava” (volume 14, special number 2, 1999) with post conference works and “Proceedings of the First Palaeoentomological Conference, Moscow, 1998” in 1999, showed palaeoentomology and amber research as very dynamic disciplines. New and faster ways of electronic communication as well as personal meetings at the conferences, workshops and congresses resulted in idea of founding of the International Palaeoentomological Society, during the Second International Congress on Palaeoentomology—Fossil Insects held in Kraków, Poland, 5th–9th September, 2001 (Azar *et al.*, 2018, Szwedo & Solórzano Kraemer, 2019, Krzemińska & Krzemiński, 2021). Since the creation of the IPS, there were attempts to make a formal registration of the Society and its Statues, first in Germany, then in Spain, in United Kingdom, and finally, 1st October, 2015, the final version of the Statues was accepted and International Palaeoentomological Society was registered in Paris, France, under registration number W75123099. By the third congress in South Africa (Pretoria) common interests resulted in a single, combined

congress on insects/arthropods/amber under the auspices of the IPS—and Fossils X3 as general abbreviation was agreed. One of the statutory aims of the IPS since the beginning was presentation of the Society journal. The fourth congress in Spain (2007), launched “Alavesia” as journal of IPS (Fig. 1). Alas, only three issues had been published, due to the hit by the European credit crunch. Four of us (Diyang Huang, Dany Azar, Ed Jarzembowski and Jacek Szwedo) seeing the need to create a specialised high-quality journal as a platform to bring together latest research and discoveries in an expedited manner started to discuss the journal in early 2017. With several attempt to different publishers, finally the agreement with Magnolia Press in Auckland, New Zealand was signed in 2018, and the first volume of “Palaeoentomology” appeared late December, 2018. Till now, 18 issues (including the current one) have been published.

According to the registered Statues, there are four different types of membership of the International Palaeoentomological Society. Since the beginning, the IPS proposed Honorary Membership for eminent palaeoentomologists. At present we have several nominations during the Congresses: 2001—Jan Koteja and Jarmila Kukalová-Peck; 2005—Irajá Damiani Pinto; 2007—Alexandr P. Rasnitsyn; 2010—Christel and Hans Werner Hoffeins, and Yuri A. Popov; 2013—Dany Azar; 2016—André Nel; 2019—Diyang Huang, Tony Mitchell and Jacek Szwedo. Below there are biographical sketches of them.

Jan Koteja (Fig. 2), was born on 17th September, 1932 in Siemianowice Śląskie (Poland), passed away 19th August, 2004 in Kraków. He was a zoologist, palaeontologist and entomologist, Professor at the Hugo Kołłątaj University of Agriculture (now: University of Agriculture) in Kraków. His group of interest was mainly coccids, scale insect and other hemipterans.



FIGURE 2. Jan Koteja with Amber Personality of the Year award in his lab, 2001. Photo: Piotr Kieraciński (family archives).

He completed his master's studies at the Faculty of Biology and Earth Sciences of the Jagiellonian University in 1959 (Master's thesis "Influence of ergot alkaloids on *Daphnia*") and began working at the Agricultural Academy. He defended his doctoral dissertation, supervised by Stanisław Smreczyński Jr. in 1966—Morphology and biology of *Luzulaspis frontalis* (Dufour) and *L. nemorosa* sp. n. (Homoptera, Coccoidea), and in 1975 habilitation dissertation—Comparative studies on the labium in the Coccinea (Homoptera), at the Faculty of Biology and Earth Sciences of the Jagiellonian University. In 1983 he obtained the title of Professor, but due to his activity in the union movement "Solidarność/Solidarity", the decision to grant the title was given to him only in 1987. He specialized in entomology and palaeontology, studying mainly coccids. He was the author of 700 papers and articles including over 120 original research articles, in the field of morphology, anatomy, biology, ecology, faunistics, systematics, palaeontology and plant protection, as well as textbooks and textbook chapters, reviews, commentaries and varia.

He was the director of the Institute of Applied Zoology (1989–1993), the head of the Department of Zoology and Ecology (1993–1994) and the Vice-Rector for Students'

Affairs (1991–1994) of the Agricultural University, he was Member of the Senate and Senate and was a highly regarded, very active member of committees and councils in the Institute of Systematics and Evolution of Animals Polish Academy of Sciences in Kraków, Museum and Institute of Zoology, Polish Academy of Sciences in Warsaw and the Museum of the Earth of the Polish Academy of Sciences in Warsaw. At these tumultuous, difficult times, he addressed many issues of immediate relevance in the academic magazine "Sowizdrzał—Listy Bractwa Sowizdrzalskiego w Krakowie" [The Eulenspiegel—Letters of the Eulenspiegels' Brotherhood in Kraków], he edited and published (1990–1996) and in more formal way in the monthly magazine "Forum Akademickie" [Academic Forum]. He was also editor of applied entomology of the Polish Journal of Entomology (1984–1991). He was as well the author of a posthumously published book on the problem of disability (1981 Year of the Disabled; Rafael, Kraków, 2008).

Professor Koteja was directly involved in organisation of the International Symposium on Scale Insects Studies (Kraków, 1990) and Second International Congress on Palaeontomology (Kraków, 2001). He was founding member of the Fossil Insects Section (later renamed to Palaeontomological Section) of the Polish Entomological Society and presided over it since its beginning (1985–1998), he was editor and publisher of the international newsletter 'Wrostek-Inclusion' (Kraków, 1985–2000). In 1992, he became member of the Arbeitskreis Bernstein in Hamburg, and as member of the Coordination Committee "Fossil Insects" of the European Science Foundation, he was editor of the international newsletter "Meganeura" (Strasbourg, 1996–1999).

Without Professor Koteja there would have been no palaeontology of scale insects. He managed to stimulate interests in scale insects among amateurs and professionals and created invaluable and unique at global scale collection of fossil scale insects. According to Professor Koteja's will, his collection of scale insects, including microscope slides, dry material, specimens preserved in alcohol, amber inclusions as well as his book collection was donated to the Faculty of Biology and Environmental Protection, Department of Zoology, University of Silesia in Katowice (DZUS), currently Zoology Research Group, Institute of Biology, Biotechnology and Environmental Protection, Faculty of Natural Sciences. Professor Koteja stimulated interest in amber and fossil insects among entomologists in Poland and worldwide, and thanks to his activities during the meetings of the Palaeontomological Section of Polish Entomological Society, editing and publishing 'Wrostek-Inclusion', he inspired to researchers to study amber and fossil insects. Professor's Koteja researches on scale insects were comprehensive and thorough, ranging from faunistics and bionomy, morphology, anatomy to

systematics, phylogeny and palaeontology. He discovered several dozens of species new to Poland (more than 60% of the country fauna!), and in his palaeococcidological studies he described 15 families of fossil scale insects and formulated highly original hypothesis of early stages of scale insects evolution.

He was awarded with Medal “For Merit for the Development of Polish Entomological Society” in 1998. For promoting interest in amber and research into inclusions as well as in recognition of his role in disseminating knowledge about insects, in 2001, Professor Koteja was awarded the tile “Amber Personality of the Year 2000” by International Amber Association. He was awarded Honorary Lifetime Membership of International Palaeontomological Society in 2001.

Professor Koteja was buried at the Rakowicki Cemetery in Kraków (sq. LXXIV, row 4, grave 25).

Selected publications:

- Koteja, J. (1974) On the phylogeny and classification of the scale insects (Homoptera, Coccinea) (discussion based on the morphology of the mouthparts). *Acta Zoologica Cracoviensia*, 19, 267–325.
- Koteja, J. (1984) The Baltic amber Matsucoccidae (Homoptera, Coccinea). *Annales Zoologici*, 37 (19), 437–496.
- Koteja, J. (1985) Essay on the prehistory of the scale insects (Homoptera, Coccinea). *Annales Zoologici*, 38 (15), 461–504.
- Koteja, J. (1986) Morphology and taxonomy of male Ortheziidae (Homoptera, Coccinea). *Polskie Pismo Entomologiczne*, 56 (3), 323–374.
- Koteja, J. (1987) *Palaeonewstedia huaniae* gen. et sp. n. (Homoptera, Coccinea, Ortheziidae) from Baltic amber. *Polskie Pismo Entomologiczne*, 57 (3), 235–240.
- Koteja, J. & Żak-Ogaza, B. (1988) *Arctorthezia antiqua* sp. n. (Homoptera, Coccinea) from Baltic amber. *Annales Zoologici*, 41 (4), 1–8.
- Koteja, J. & Żak-Ogaza, B. (1988) *Newstedia succini* sp. n. (Homoptera, Coccinea) from Baltic amber. *Annales Zoologici*, 41 (5), 9–14.
- Koteja, J. (1988) *Eomatsucoccus* gen. n. (Homoptera, Coccinea) from Siberian Lower Cretaceous deposits. *Annales Zoologici*, 42 (4), 141–163.
- Koteja, J. (1990) Paleontology. In: Rosen, D. (Ed.), *Armoured scale insects, their biology, natural enemies and control*, Elsevier Science Publisher, Amsterdam, pp. 149–163.
- Koteja, J. (1996) Scale insects (Homoptera: Coccinea) a day after. In: Schaefer, C.W. (Ed.), *Studies on Hemipteran Phylogeny*. Thomas Say Publications in Entomology, Proceedings. Entomological Society of America, Lanham, Maryland. pp. 65–88.
- Koteja, J. (2000) Scale insects (Homoptera, Coccinea) from Upper Cretaceous New Jersey amber. In: Grimaldi, D. (Ed.), *Studies on fossils in amber, with particular reference to the Cretaceous of New Jersey*. Backhuys Publishers, Leiden, pp. 147–229.

- Koteja, J. (2000) Advances in the study of fossil coccids (Hemiptera: Coccinea). *Polskie Pismo Entomologiczne*, 69 (2), 187–218.
- Koteja, J. (2001) Essays on coccids (Hemiptera: Coccinea). Paleontology without fossils? *Prace Muzeum Ziemi*, 46, 41–53.
- Koteja, J. (2004) Scale insects (Hemiptera: Coccinea) from Cretaceous Myanmar (Burmese) amber. *Journal of Systematic Palaeontology*, 2, 109–114.
- Koteja, J. (2008) Xylococcidae and related groups (Hemiptera: Coccinea) from Baltic amber. *Prace Muzeum Ziemi*, 49, 19–56.
- Koteja, J. & Azar, D. (2008) Scale insects from Lower Cretaceous amber of Lebanon (Hemiptera: Sternorrhyncha: Coccinea). *Alavesia*, 2, 133–167.

Jarmila Kukalová-Peck (Fig. 3), was born on 28th July, 1930 in Prague, Czech Republic, palaeontologist, well-known for her revolutionary and sometimes controversial hypotheses on insect evolution, particularly for her hypothesis on the origin of insect wings, which proposes that wings are derived from an epicoxal exite of the insect’s leg. This hypothesis is known as the epicoxal (pleural) hypothesis. Among Jarmila Kukalová-Peck’s other contributions are: a new system of homologisation of insect wing veins, a hypothetical reconstruction of the ancestral insect wing (protowing) including its wing base with four columns of articular sclerites delimited by sutures, and a new proposal of homology regarding the structure of arthropod appendages.



FIGURE 3. Jarmila Kukalová-Peck in the laboratory at Carleton University in Ottawa in November, 2008. Photo: Jakub Prokop.

Jarmila Kukalová-Peck is currently a research adjunct professor in the Department of Earth Sciences at Carleton University in Ottawa (Canada). After her studies

at Faculty of Science at Charles University in Prague she received CSc in palaeontology (the equivalent of PhD) in 1962 defending her doctoral thesis entitled “Permian Insects of Moravia. Part I. Miomoptera”. Since 1952 she joined the staff of Department of Palaeontology at Charles University first as Technical Assistant and later as Assistant Professor to Professor Josef Augusta. In 1968 she defended her habilitation and continued as Associate Professor until she moved to Ottawa (Ontario, Canada) with her family. During her career at Charles University, she was NSF Fellow (1964–1965) at Harvard University and Alexander Agassiz Lecturer (1968–1969) collaborating with Professor Frank Morton Carpenter at the Harvard Museum of Comparative Zoology. She has regularly presented her results on international symposiums like International Congress of Entomology and gave lectures in many universities and museums all over the world.

She began her career working on taxonomy and morphology of Palaeozoic insects from the territory of Czechoslovakia (Central Bohemia and Upper Silesia). However, the main collecting effort was later stressed on the sampling of new Lower Permian localities in southern Moravia (Boskovice Furrow) together with students and colleagues from Charles University. The best sampled site is Obora near Jablůňany where she found diverse and abundant insect fauna with some important discoveries like the earliest representatives of beetles.

Further research of Jarmila Kukalová-Peck was focused especially to the Palaeozoic groups Diaphanopteroidea, Megaseoptera, Palaeodictyoptera and Permothemistida, which she terms the Rostropalaeoptera or Palaeodictyopteroid assemblage. According to her studies this taxon represents a sister group of Hydropalaeoptera (Ephemeroptera + Odonoptera) comprising mayflies, dragonflies, damselflies and their stem group. During her long term stay at Harvard University she made extensive revision of Palaeodictyoptera from famous locality Commentry (France), which was later published as series of articles in *Psyche* and provide a unique source of knowledge on this extinct group of pterygotes from one locality.

Working with Palaeozoic insects, particularly with fossils of palaeodictyopteran Homiopteridae, she outlined her hypothesis on the epicoxal origin of the wing, which contradicted the widely accepted paranotal hypothesis of wing origin (Müller, 1875, Crampton, 1916). Her hypothesis, which is partly supported by recent discoveries in the fields of embryology, developmental genetics and molecular phylogenetics, is still highly disputed, and some researchers especially refuse her epicoxal hypothesis and her reconstruction of the ancestral wing articulation, while most specialists indeed accept her new homologisation of the insect wing venation.

Also due to her work with fossils is the elaboration

of a system of homologisation for insect wing veins, with which she is mainly occupied today and which is the simplest and most general of all the systems that have been proposed. Kukalová’s system meanwhile has superseded Comstock and Needham’s system (1898) in the estimation of entomologists.

Jarmila Kukalová-Peck received awards and honors as Fellow of the Royal Society of Canada (1993), Honorary member of the Czech Entomological Society (1995) and Research Gold Medal of Canadian Entomological Society (1996).

The importance and fruitfulness of Jarmila Kukalová-Peck’s magnificent scientific works are apparent in her nearly eighty publications, which are cited worldwide. Since 2001 Jarmila Kukalová-Peck is Honorary Member of International Palaeontological Society. We are pleased that we can hereby wish a continuation of such interesting research activities, and all the best, to Jarmila Kukalová-Peck for the coming years.

Selected publications:

- Kukalová, J. (1969) On the systematic position of the supposed Permian beetles Tshcardocoleidae, with a description of a new collection from Moravia. *Sbornik Geologických Ved, Paleontologie*, 11, 139–160.
- Kukalová, J. (1969) Revisional study of the order Palaeodictyoptera in the Upper Carboniferous shales of Commentry, France. Part 1. *Psyche*, 76 (2), 163–215.
- Kukalová, J. (1969) Revisional study of the order Palaeodictyoptera in the Upper Carboniferous shales of Commentry, France. Part 2. *Psyche*, 76, 439–486.
- Kukalová, J. (1970) Revisional study of the order Palaeodictyoptera in the Upper Carboniferous shales of Commentry, France. Part 3. *Psyche*, 77 (1), 1–44.
- Kukalová-Peck, J. (1978) Origin and evolution of insect wings and their relation to metamorphosis, as documented by the fossil record. *Journal of Morphology*, 15 (6), 53–126.
- Kukalová-Peck, J. (1983) Origin of the insect wing and wing articulation from the arthropodan leg. *Canadian Journal of Zoology*, 61 (7), 1618–1669.
- Kukalová-Peck, J. & Richardson, E.S. Jr. (1983) New Homiopteridae (Insecta: Paleodictyoptera) with wing articulation from Upper Carboniferous strata of Mazon Creek, Illinois. *Canadian Journal of Zoology*, 61 (7), 1670–1687.
- Riek, E.F. & Kukalová-Peck, J. (1984) A new interpretation of dragonfly wing venation based upon Early Carboniferous fossils from Argentina (Insecta: Odonatoidea) and basic characters states in pterygote wings. *Canadian Journal of Zoology*, 62 (6), 1150–1166.
- Kukalová-Peck, J. (1991) Chapter 6: Fossil history and the evolution of hexapod structures. In: Naumann, I.D. (Ed.), *The insects of Australia, a textbook for students and research workers* (2nd ed.), 1, Melbourne University Press, Melbourne, pp. 141–179.

- Wootton, R.J. & Kukalová-Peck, J. (2000) Flight adaptations in Palaeozoic Palaeoptera (Insecta). *Biological Review*, 75, 129–167.
- Haas, F. & Kukalová-Peck, J. (2001) Dermaptera hindwing structure and folding: new evidence for familial, ordinal and superordinal relationships within Neoptera (Insecta). *European Journal of Entomology*, 98 (4), 445–509.
- Kukalová-Peck, J. & Lawrence, J.F. (2004) Relationships among coleopteran suborders and major endoneopteran lineages: evidence from hind wing characters. *European Journal of Entomology*, 101 (1), 95–144.
- Kukalová-Peck, J. (2009) Carboniferous protodonatoid dragonfly nymphs and the synapomorphies of Odonoptera and Ephemeroptera (Insecta: Palaeoptera). *Palaeodiversity*, 2, 169–198.
- Kukalová-Peck, J. & Beutel, R.G. (2012) Is the Carboniferous †*Adiphlebia lacoana* really the “oldest beetle”? Critical reassessment and description of a new Permian beetle family. *European Journal of Entomology*, 109 (4), 633–645.

Irajá Damiani Pinto (Fig. 4), was born on 3rd July, 1919 in Porto Alegre, Rio Grande do Sul, Brazil, he passed away 21st of June 2014 in Porto Alegre, Rio Grande do Sul, Brazil. He was a Brazilian naturalist, a reference in crustacean paleontology, first worker on fossil insects in Brazil, researcher and university professor. He was the first student to graduate in the natural history course at the Faculty of Philosophy at UFRGS, and later developed a brilliant career at that institution. He completed his doctorate in geology at the University of São Paulo (USP) in 1972. Irajá Damiani Pinto also created and structured the first Geology Course and he was director of the School of Geology, founded at UFRGS. He was director of the Institute of Natural Sciences, director of the Amparo Foundation to the Research of the State of Rio Grande do Sul (FAPERGS), and he founded the Center for Limnological Studies and Coastal, CECLIMAR and an associated Museum, for which he served as director for 11 years. He created and directed the Gondwana Research Center (CIGO), an auxiliary organ of the Geosciences Institute of the Federal University of Rio Grande do Sul. He obtained scholarships from the Rockefeller Foundation, the British Council, the Cooperation Technique Française, the Agency for International Development and the Academy of Sciences of the Soviet Union. In 1974, Irajá Damiani Pinto was elected president of the Research Support Foundation of the State of Rio Grande do Sul (FAPERGS), being re-elected twice and remaining in the position for nine years. At the invitation of Petrobras, he organized the 1st training course for petroleum geologists in Bahia in 1956. In 1968 he implemented a postgraduate course in geosciences at UFRGS, with a master's and doctorate. Created the university's first journals in the area of Natural Sciences

(e.g., *Pesquisas Zoologia*, *Pesquisas em Geociências*), increasing international exchange and encouraging the training of professionals. He also formed a research school on Paleontology of Carboniferous, Permian and Triassic of the South of Brazil. Having collaborated extensively with palaeontology, with a great deal of work in training human resources and administration.



FIGURE 4. Irajá Damiani Pinto. <http://www.museumin.ufrgs.br/MemIrajaPinto.htm>

Irajá Damiani Pinto was President of the Brazilian Society of Geology (1968/1969 and 1978/1979). He was a member and coordinator of the CNPq Geology Commission and President of the Second Congress of Latin America of Paleontology (1981). He graduated 22 masters, 8 doctors and in 1990 received the title of Professor Emeritus by the Federal University of Rio Grande do Sul.

During his lifetime he received numerous honors, since 1979, he has been a Full Member of Brazilian Academy of Sciences and is proud to have received the Grand Cross of National Order of Scientific Merit, granted in 1998 by the President of the Republic, for its contribution to the development of science in Brazil, gold medals from the Brazilian Geology and Paleontology societies, and the current Museum of Paleontology of the Geosciences Institute of UFRGS was named after him. He received Honorary Memberships of International Palaeontological Society in 2005, during the Fossils X3 Congress in Pretoria, that he actively attended.

Selected publications:

- Pinto, I.D. (1956) Artropodos da Formação Santa Maria (Triássico Superior) do Rio Grande do Sul, com notícias sobre alguns restos vegetais. *Boletim da Sociedade Brasileira de Geologia*, 5 (1), 75–95.
- Pinto, I.D. (1972) Permian insects from the Parana basin, South Brasil. 1. Mecoptera. *Revista Brasileira de Geociências*, 2, 105–116.

- Pinto, I.D. & Pinto de Ornellas, L. (1974) New Cretaceous Hemiptera (Insecta) from Codó Formation, Northern Brazil. *Anais do 28 Congresso Brasileiro de Geologia*, 289–304.
- Pinto, I.D. & Pinto de Ornellas, L. (1978) Upper Carboniferous insects from Argentina. 1. Familia Diaphanopteridae (Megasecopteroidea). *Pesquisas (Zoologia)*, 10 (1), 87–95.
- Pinto, I.D. & Purper, I. (1978) A new genus and two new species of Plecopteran insects from the Triassic from Argentina. *Pesquisas (Zoologia)*, 10 (1), 77–86.
- Pinto, I.D. & Pinto de Ornellas, L. (1980) Upper Carboniferous insects from Argentina. 2. Familia Narkemocargidae (Paraplecoptera). *Boletín de la Academia Nacional de Ciencias*, 53 (3–4), 287–291.
- Pinto, I.D. & Pinto de Ornellas, L. (1980) Permian insects from the Parana basin, South Brazil. 2. Neuroptera. *Pesquisas (Zoologia)*, 13, 155–159.
- Pinto, I.D. & Pinto de Ornellas, L. (1981) Permian insects from Parana basin, South Brazil. 3. Hemiptera, 1. Pereboridae. *Anais do Congresso Latino-Americano de Paleontologia*, 2, 209–219.
- Pinto, I.D. (1986) Carboniferous insects from Argentina. 3. Family Xenopteridae Pinto nov. fam. (Megasecoptera). *Pesquisas (Zoologia)*, 18, 22–29.
- Pinto, I.D. (1987) Permian insects from Parana basin, South Brazil. 4. Coleoptera. *Pesquisas (Zoologia)*, 19, 5–12.
- Pinto, I.D. (1987) Permian insects from Parana basin, South Brazil. 5. Homoptera-Cicadidea. *Pesquisas (Zoologia)*, 19, 13–22.
- Pinto, I.D. (1990) Permian insects from Parana basin, South Brazil. 6. Homoptera, 3. Fulgoringruidae. *Pesquisas em Geociências*, 17 (1–2), 3–6.
- Pinto, I.D. (1992) Carboniferous insects from Argentina. 5. Narkeminidae Pinto et Ornellas 1991, Order Paraplecoptera. *Anais do Academia Brasileira de Ciencias*, 64 (3), 289–292.
- Pinto, I.D. & Adami-Rodrigues, K. (1995) A new Upper Carboniferous insect from Itararé subgroup, Parana basin, Brazil. *Pesquisas em Geociências*, 22 (1–2), 53–57.
- Pinto, I.D. (1996) *Rigattoptera ornellasae* n. gen., n. sp., a new fossil insect from the Carboniferous of Argentina. *Neues Jahrbuch für Geologie und Paläontologie, Monashfte*, 1996(1), 43–47.
- Pinto, I.D. & Adami-Rodrigues, K. (1997) *Velisoptera taschi* nov. gen., nov. sp. a Carboniferous insect from Bajo de Velis, Argentina. *Pesquisas em Geociências*, 24 (1–2), 47–52.
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- Pinto, I.D., Piñeiro, G. & Verde, M. (2000) First Permian insects from Uruguay. *Pesquisas em Geociências*, 27 (1), 89–96.
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Alexandr Pavlovich Rasnitsyn (Fig. 5), was born on 24th September, 1936 in Moscow, Russia. His scientific interests are focused on palaeontology and palaeoentomology, phylogeny, and taxonomy of hymenopteran insects, but also in general problems of palaeontology, phylogeny and taxonomy of the insects in general, as well as more wide biological questions, including the evolutionary theory and methodology of phylogenetics, taxonomy, and nomenclature.



FIGURE 5. Alexandr P. Rasnitsyn in his laboratory, 2008. Photo: Roman A. Rakitov.

His interest in insects and general natural history soon became apparent, and he joined the Club of Young Biologists at the Moscow Zoo. In 1955 he enrolled at the Moscow State University, and in 1960 graduated with honors and a master degree in entomology, his thesis being on “Hibernation in the ichneumon flies subfamily Ichneumoninae”, showing that his passion for Hymenoptera was developed right from the start. That same year he joined the Arthropoda Laboratory, headed by Professor Boris Rohdendorf, in the Paleontological Institute of the USSR (now Russian) Academy of Sciences, Moscow, working succeedingly as a technician, junior and senior research worker. In 1967 he received his PhD in biology from the Paleontological Institute with the thesis “The Mesozoic Hymenoptera Symphyta and the early evolution of Xyelidae”. After defending in 1978 his Dr. hab. (DSc) thesis “The origin and evolution of Hymenoptera” Alexandr P. Rasnitsyn became Head of the Laboratory of Arthropods. In 1991 he received the title of a Biology Professor. In 1996 he resigned from heading the Laboratory and continued there as a principal research worker, but after the new leader, Vladimir V. Zherikhin, suddenly died in 2001, he again became the acting Head of the Laboratory (2002–2020).

During more than 20 field seasons between 1956 and 2009 Alexandr P. Rasnitsyn conducted field work in various regions of Russia and the former USSR, including

Fergana Valley, Issyk Kul, Central Asia, Transbaikalia, Taimyr, Okhotsk, Sikhote-Alin, and other parts of Siberia and Far East. He participated also in expeditions to England, Germany, Israel, Mongolia, South Africa and USA.

Alexandr P. Rasnitsyn has published over 400 scientific articles and books in several languages, including 17 monographs. He described *ca.* 250 new genera and over 800 new species of arthropods, mainly fossil ones. Over 50 species of animals have been named in honor of Alexandr P. Rasnitsyn, as well as some taxa of higher rank. The ideas of Alexandr P. Rasnitsyn have formed the foundation of the modern classification of the Hymenoptera, but he influenced also the knowledge and understanding of many other insect orders. He suggested his own hypothesis on the origin of insect flight. According to him, the wings first evolved, as a means to control gliding, in relatively large insects that had turned to feeding on generative organs of arboreal plants. He also contributed significantly to the holistic (“epigenetic”) theory of evolution and, in particular, has put forward the concept of “adaptive compromise” and the notion of macroevolution being irreducible to microevolutionary processes alone. He has also made a significant contribution to palaeoecology and in collaboration with Vladimir V. Zherikhin developed the theory of ecological crises. Contesting the strict cladistic approach he developed an alternative approach to biological systematics, called “phyletics”, which differs from phenetics in taking into account genealogy in addition to similarities and hiatuses.

He took part in international palaeontological conferences, *e.g.*, in South Africa (2005), Spain (2007), China (2010), Lebanon (2013), Great Britain (2016).

In 2001 Alexandr P. Rasnitsyn received award “Honoured Scientist” by the Russian Federation. He was given Honorary Membership of the Russian Entomological Society (2004) and has been a member of their Council since 2007. He was awarded the Distinguished Research Medal of the International Society of Hymenopterists in 2008. He has long held an honorary appointment at the Natural History Museum, London, England. Since 2004 he is Honorary Member and since 2007 member of Council of the Russian Entomological Society. Alexandr Pavlovich Rasnitsyn is founding member of the International Palaeontological Society, and he was its first President (2001–2005), currently he is Honorary Member (since 2007) of the IPS.

Selected publications:

- Rasnitsyn, A.P. (1969) Origin and evolution of lower Hymenoptera. *Trudy Paleontologicheskogo Instituta Akademii Nauk SSSR*, 123, 1–196 [In Russian].
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- Rasnitsyn, A.P. (2000) Testing cladograms by fossil record: The ghost range test. *Contributions to Zoology*, 69, 251–258.
- Rasnitsyn, A.P. (2005) *Selected works on evolutionary biology*. Tovarisstvo nauchnykh izdaniy KMK, Moscow, iv+347 pp.
- Rasnitsyn, A.P. (2006) Classical and non-classical taxonomy: another view. *Zhurnal Obshchei Biologii*, 67 (5), 385–388 [In Russian].
- Rasnitsyn, A.P. (2006) Ontology of evolution and methodology of taxonomy. *Paleontological Journal*, 40, (supplement 6), S679–S737.
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- Rasnitsyn, A.P., Aristov, D.S. & Rasnitsyn, D.A. (2015) Dynamics of insect diversity during the Early and Middle Permian. *Paleontological Journal*, 49 (12), 1282–1309.
- Rasnitsyn, A.P., Bashkuev, A.S., Kopylov, D.S., Lukashevich, E.D., Ponomarenko, A.G., Popov, Yu.A., Rasnitsyn, D.A., Ryzhkova, O.V., Sidorchuk, E.A., Sukatsheva, I.D. & Vorontsov, D.D. (2016) Sequence and scale of changes in the terrestrial biota during the Cretaceous (based on materials from fossil resins). *Cretaceous Research*, 61, 234–255.
- Rasnitsyn, A.P. (2020) Philosophy of evolutionary biology. *Zhurnal Obshchei Biologii*, 81 (1), 54–80 [In Russian with English translation in *Biology Bulletin Reviews*, 2021, 11, 1–26].
- Kopylov, D.S., Rasnitsyn, A.P., Aristov, D.S., Bashkuev, A.S., Bazhenova, N.V., Dmitriev, V.Yu., Gorochoy, A.V., Ignatov, M.S., Ivanov, V.D., Khramov, A.V., Legalov, A.A., Lukashevich, E.D., Mamontov, Yu.S., Melnitsky, S.I., Oglaza, B., Ponomarenko, A.G., Prokin, A.A., Ryzhkova, O.V., Shmakov, A.S., Sinitshenkova, N.D., Solodovnikov, A.Yu., Strelnikova, O.D., Sukacheva, I.D., Uliakhin, A.V., Vasilenko, D.V., Wegierek, P., Yan, E.V. & Zmarzly, M. (2020) The Khasurty Fossil Insect Lagerstätte. *Paleontological Journal*, 54 (11), 1221–1394.

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Dany Azar (Fig. 6), born in Sin El-Fil (Lebanon) on 19th August, 1973, is currently a tenured Professor and Research Director at the Lebanese University - Faculty of Science II, Fanar, Lebanon. He achieved his PhD in 2000 in University Paris XI (France). He received his Accreditation to Supervise Research (Habilitation) in 2003 from the University of Reims-Champagne-Ardennes (France). His expertise on amber and fossil insects is wide and includes several groups. He supervised and co-supervised twelve PhDs among which three are in progress.



FIGURE 6. Dany Azar during field trip to Spitsbergen in July, 2011. Photo: Torsten Wappler.

He is a founder member (2001) of the International Palaeoentomological Society (IPS) and was its President for two successive periods (April 2013–April 2019). He was elected to the Honorary Membership of the IPS in 2013 [during the Byblos Congress (6th Fossils X3) which he organised]. During his presidency, the IPS was officially registered on the 1st of October 2015 in Paris. In 2016 [during the Edinburgh Congress (7th Fossils X3)] he declared the 1st of October of each year as ‘Fossil Insects Day’. Since then, every year this occasion is celebrated by the issue of special limited-edition postage stamps with fossil insects (in amber or adpressions). In 2018, with Dying Huang and Jacek Szwedlo, Azar founded the journal ‘Palaeoentomology’.

Dany Azar is also Vice-President of the World Amber Council (Gdańsk, Poland), since May 2013 and President and Founder of the Palaeontological and Evolutionary Lebanese Association (APEL). He is Editor-in-Chief of

‘Palaeoentomology’; Associate Editor of ‘the Science of Nature’; member of the editorial boards of ‘Polskie Pismo Entomologiczne’, ‘Life the Excitement of Biology’, and ‘Annales de la Société Entomologique de France’. He was Visiting Professor several times in the Muséum national d’Histoire naturelle, Paris (France), the Natural History Museum, London, (UK), Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, Nanjing (China), and Department of the Earth of the University of Rennes (France). He organized the “6th Fossil X3” Congress, in 2013, in Lebanon. He has published about 300 research papers, including several in high-profile journals. His publications are cited almost 3625 times (till January 2021), H-index = 30.

Dany Azar is the discoverer of hundreds of amber outcrops in several countries [including Lebanon (mainly), France, Norway (Spitzbergen) and China] and several dozen-records of the earliest or most recent occurrence of several entomological groups. He co-discovered the first dinosaurs in Lebanon as well as being the first person in this country to find and extract petroleum from shale oil. He has undertaken field works and has expertise on fossil insects held in many institutions and countries (France, China, UK, USA, Russia, Poland, Germany, Spitzbergen, Spain, and Lebanon).

He received several awards: in 2018, the Green Phoenix for accomplished scientific work from the Association LEBA and the Saint Joseph University; in 2017, Award of Distinguished Veteran for Lebanon and the Arabic World; in 2014, Reward Jesus Santiago Moure of Taxonomy, delivered by the Brazilian Society of Zoology for the best scientific publication on taxonomy for the years 2012–2013; in 2013, Award and Medal of the Presidency of the City of Gdańsk (Poland) delivered by the President of the City of Gdańsk for his active participation in the study of fossil insects in amber; in 2012, Award and Medal of distinguished searcher delivered by the Lebanese National Council of Scientific Research (CNRS) on the occasion of its golden jubilee, in the House of Government; in 2006, Medal of the Franco-Lebanese bilateral scientific program (CEDRE) for the best project in the ten years of the creation of the CEDRE program; and in 1998, Award “Basualdo Aguirre” from the “Chancellerie des Universités de Paris”, allotted as recompense for scientific work carried out.

Selected publications:

- Azar, D., Nel, A., Solignac, M., Paicheler, J.-C. & Bouchet, F. (1999) New genera and species of phlebotomid and psychodid flies from the Lower Cretaceous amber of Lebanon (Insecta: Diptera: Phlebotomidae, Psychodidae). *Palaeontology*, 42 (6), 1101–1136.
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- Huang, D.Y., Bechly, G., Nel, P., Engel, M.S., Prokop, J., Azar, D., Cai, C.Y., van de Kamp, T., Staniczek, A.H., Garrouste, R., Krogmann, K., dos Santos Rolo, T., Baumbach, T., Ohlhoff, R., Shmakov, A.S., Bourgoïn, T. & Nel, A. (2016) New fossil insect Order Permopsocida elucidates major radiation and evolution of suction feeding in hemimetabolous insects (Hexapoda: Acercaria). *Scientific Reports*, 6, 23004.
- Pérez-de la Fuente, R., Peñalver, E., Azar, D. & Engel, M.S. (2018) A soil-carrying lacewing larva in Early Cretaceous Lebanese amber. *Scientific Reports*, 8, 16663.
- Azar, D., Maksoud, S. & Huang, D.Y. (2020) A new dipteromantispid from the mid-Cretaceous Burmese amber (Neuroptera: Dipteromantispidae). *Palaeoentomology*, 3 (4), 407–414.
- Klimov, P.B., Vorontsov, D., Azar, D., Sidorchuk, E.A., Braig, H.R., Khaustov, A.A. & Tolstikov, A.V. (2021) A transitional fossil mite (Astigmata: Levantoglyphidae fam. n.) from the Early Cretaceous suggests gradual evolution of phoresy-related metamorphosis. *Scientific Reports*, 11, 15113.

Christel and Hans Werner Hoffeins (Fig. 7), within decades establishing a rich collection of amber varieties, natural forms, colour varieties, and inclusions from Baltic and Bitterfeld amber with 350 types (till January 2021) (Collection code: CCHH). Hans Werner well known expert for manual preparation of amber inclusions, over years was asked to work for international palaeoentomologists and

embed type material of international museum collections in epoxy.



FIGURE 7. Christel and Hans Werner in München, 2003. Photo: Hoffeins archives.

Christel Hoffeins was born on 28th August, 1948 in Brietlingen, a village near Lüneburg, Lower Saxony. Hans Werner Hoffeins was born on 29th January, 1940 in Hamburg. Christel and Hans get married 9th May, 1972, they have one son who was born in 1979. Christel worked as professional restaurant worker, Hans as professional cooker, place of their domicile is Hamburg.

Amber hunters and “amber fever” infected since 1981 when they were watching Danish amber fishermen at the North-Sea coast and picked-up amber for the first time.

Their collecting sites are: coastline of the North-Sea with net (German term Kescher) 1981–1993; Usedom, North-East Germany, at a marl lenses from Pleistocene, historical site exploited by local persons since ~1900, digging and by hydraulic method 1989–1994; Bitterfeld, open coal mine in Saxony-Anhalt, picking up and digging, 1993–2000; Gdańsk and Amberif since 1997; Yantarnyi and Kaliningrad twice a year.

Christel and Hans Werner Hoffeins are members of “Arbeitskreis Bernstein” (Verein zur Förderung des Geologischen-Paläontologischen Museums der Universität Hamburg e.V. / Society for the Promotion of Geology and Palaeontology Museum of the University of Hamburg e.V.), since 1993, in 1995 Christel Hoffeins was elected as secretary / Schriftführerin, member of the board; International Palaeoentomological Society (since 2001,

Kraków, Poland) and Honorary Members of International Palaeontological Society since 2010. They are also members of the International Amber Association, Christel Hoffeins since 2010, in 2012 she was accredited as an expert in natural amber specimens and amber inclusions. Christel and Hans Werner Hoffeins represent Germany on World Amber Council (2016).

They took part in all of the following conferences of International Palaeontological Society in Kraków (2001), Pretoria, South Africa (2005), Vitoria Gasteiz, Spain (2007), Beijing, China (2010), Byblos, Lebanon (2013), Edinburgh, UK (2016), Santo Domingo, Dominican Republic (2019), and also the conference in Kaliningrad, Russia (2010).

They were introduced in May 1997 to Professor Ryszard Szadziewski by Jacek Serafin, well known Polish “bursztynnik” and amber inclusions collector, beginning of a hearty friendship with Malgorzata & Ryszard Szadziewski, later also Ewa & Wiesław Krzemiński, Yuri Popov and many others.

They participated in scientific meetings in Germany as the workshop “Fossil Insects” organised by Prof. Wilfried Wichard and in meetings of the Palaeontological Section, Polish Entomological Society and in seminars held during International Amber Fairs Amberif.

They are authors of publications on amber, most cited are “On the preparation and the conservation of amber inclusions” (2001), “On the frequency of inclusions in Baltic and Bitterfeld amber (Tertiary, Eocene) from unselected material, with special reference to the order Diptera” (2003), “Die Bernsteinküste. Jantarnyj Bereg. Wanderungen in Wort und Bild, gestern und heute” (2008).

Unselected material from different localities of Baltic and Bitterfeld amber deposits, collected by the authors in the years 1987–2001, is the basis for a current assessment of the frequency of inclusions of different arthropod taxa.

Another passion of Christel and Hans Werner Hoffeins besides amber is collecting and identifying mushrooms, spending vacations at the cottage of Ryszard Szadziewski in Mazury lakelands permanently is combined with searching and photographing mushrooms. They are authors of “Checklist of Macromycetes (Fungi) from the Wyskok village in Masurian Lakeland, NE Poland” (2017).

Selected publications:

- Hoffeins, C., Hoffeins, H.W. & Wagner, R. (1997) Beschreibung einer Art der Gattung *Heleodromia* (Diptera, Empididae, Hemerodromiinae) aus dem Bitterfelder Bernstein. *Studia dipterologica*, 4 (2), 441–446.
- Wagner, R., Hoffeins, C. & Hoffeins, H.W. (2001) A fossil nymphomyiid (Diptera) from the Baltic and Bitterfeld amber. *Systematic Entomology*, 25 (1), 115–120.

- Hoffeins, H.W. (2001) On the preparation and conservation of amber inclusions in artificial resin. *Polskie Pismo Entomologiczne*, 70 (3), 215–219.
- Hoffeins, C. & Hoffeins, H.W. (2003) Untersuchungen über die Häufigkeit von Inkluden in Baltischem und Bitterfelder Bernstein (Tertiär, Eozän) aus unselektierten Aufsammlungen unter besonderer Berücksichtigung der Ordnung Diptera [On the frequency of inclusions in Baltic and Bitterfeld amber (Tertiary, Eocene) from unselected material, with special reference to the order Diptera]. *Studia dipterologica*, 10 (2), 381–392.
- Hoffeins, C. & Rung, A. (2005) *Procyamops succini*, a new genus and new species of Periscelididae (Diptera: Brachycera) from Baltic amber (Tertiary, Eocene). *Studia dipterologica*, 12 (1), 23–27.
- Hoffeins, C. (2008) *Die Bernsteinküste—Jantarnyj Bereg. Wanderungen in Wort und Bild, gestern und heute*. Ampyx-Verlag Dr. A. Stark, Halle, 126 pp.
- Tschirnhaus, M. von & Hoffeins, C. (2009) Fossil flies in Baltic amber—insights in the diversity of Tertiary Acalyptratae (Diptera, Schizophora), with new morphological characters and a key based on 1,000 collected inclusions. *Denisia* 26, zugleich Kataloge der oberösterreichischen Landesmuseen Neue Serie 86, 171–212.
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- Bertrand, M., Sidorchuk, E.A. & Hoffeins, C. (2015) Before the summer turns to winter: the third labidostommatid genus from Baltic amber has subtropical kin. *Acarologia*, 55 (3), 321–336.
- Sinclair, B.J. & Hoffeins, C. (2015) New fossil species of *Ragas* Walker (Diptera: Empididae) in Baltic amber (Tertiary, Eocene). *Bonn zoological Bulletin*, 62 (1), 92–99.
- Hoffeins, C., Hoffeins, H.W., Kutzscher, C. & Blank, S.M. (2018) Jumping to more knowledge - a new flea in Baltic amber. In: Wagner-Wysiecka, E., Szwedo, J., Sontag, E., Sobecka, A., Czebreszuk, J. & Cwaliński, M. (Eds), *International Symposium Amber: Science and Art. Abstracts. Gdańsk, Poland, 22-23 March 2018*. Gdańsk International Fair Co. (MTG SA), Gdańsk, pp. 19–20.
- Pérez-de la Fuente, R., Hoffeins, C. & Roháček, J. (2018) A new *Acartophthalmites* Hennig from Eocene Baltic amber (Diptera, Acalyptratae). *ZooKeys*, 737, 125–139.
- Baranov, V., Hoffeins, C., Hoffeins, H.W. & Haug, J.T. (2019) More than dead males: reconstructing the ontogenetic series of terrestrial non-biting midges from the Eocene amber forest. *Bulletin of Geosciences*, 94 (2), 187–199.

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- Sadowski, E.-M., Seyfullah, L.J., Regalado, L., Skadell, L.E., Gehler, A., Gröhn, C., Hoffeins, C., Hoffeins, H.W., Neumann, C., Schneider, H. & Schmidt, A.R. (2019) How diverse were ferns in the Baltic amber forest? *Journal of Systematics and Evolution*, 57 (4), 305–328.
- Tischer, M., Gorczak, M., Bojarski, B., Pawłowska, J., Hoffeins, C., Hoffeins, H.W. & Wrzosek, M. (2019) New fossils of ascomycetous anamorphic fungi from Baltic amber. *Fungal Biology*, 123 (11), 804–810.
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- Stark, A., Hoffeins, C., Hoffeins, H.W. & Arillo, A. (2020) Signal from the Cretaceous—a new species of *Alavesia* from Burmese amber (Diptera: Empidoidea: Atelestidae). *Palaeoentomology*, 3 (5), 513–524.
- Wagner, R., Hoffeins, C. & Hoffeins, H.W. (2021) Re-description of *Hoffeinsodes inexpectatus* (Wagner, 2012) (Psychodidae, Bruchomyiinae) from Baltic amber. *Palaeoentomology*, 4 (1), 15–18.

Yuri Alexandrovich Popov (Fig. 8), was born on 5th March, 1936, in Moscow and passed away 16th of November, 2016. After graduating from high school, he enrolled at the Biology and Soil Faculty of Moscow State University, where he studied at the Department of Entomology. While still a student he took as his object of study the true bugs (Heteroptera)—an order of insects numbering tens of thousands of species. During the expedition of the Main Botanical Garden of the USSR Academy of Sciences in 1957 and 1958 he gathered large collections of modern true bugs of the Western Tien Shan, which were treated in his diploma thesis “The heteropteran fauna of the Western Tian-Shan” and first articles. After graduating from Moscow State University in 1959, he joined the Laboratory of Arthropods at the Paleontological Institute of the USSR Academy of Sciences. He was holding the positions of senior technical worker (1959–1961), junior research worker (1961–1971), secretary of the international scientific connection in the Presidium of the Academy of Sciences of the USSR (1971–1975), and senior research worker (since 1981). He was Professor (Senior Scientific Research) and Curator at the Zoological Museum of Moscow State University.



FIGURE 8. Yuri (middle) with Hans Werner Hoffeins (left) and Aleksander Herczek (Byblos, 2013). Photo: Dany Azar.

The scientific interests of Yuri A. Popov were focused on the taxonomy, phylogeny, evolution, morphology and ecology of fossil and recent hemipteran insects (Heteroptera and Coleorrhyncha). He began to study true bugs from the Jurassic of Karatau and other Mesozoic faunas and, in 1968, defended his PhD thesis, prepared under the supervision of Boris B. Rohdendorf and Elena E. Becker-Migdisova, “Historical development of the infraorder Nepomorpha (Heteroptera)” published as a book in 1971. His cooperation with Polish scientists began in 1964 when he met the Professor Sędzimir Maciej Klimaszewski, who was at that time visiting the Laboratory of Arthropods of the Palaeontological Institute of the USSR Academy of Sciences. In 1969, he worked for six months at the Institute of Zoology Polish Academy of Sciences in Warsaw, where he made friends with Polish colleagues and learned a lot from Professor Tadeusz L. Jaczewski, a major expert on water bugs, who had a significant influence on systematic and morphological views regarding Nepomorpha. During that first visit, he also made the acquaintance of Professor Henryk Szelegiewicz, a well-known specialist in Aphidoidea (Hemiptera). For many years, the close, long-standing and fruitful cooperation connected him with team of the Department of Zoology of the University of Silesia in Katowice, mainly with Professor Aleksander Herczek. Considerable helped in the joint study of fossil material (both amber and stone remains) that was given by the world-famous hemipterologist Professor Jan Koteja (Kraków)—a good friend and colleague of the Russian palaeontologists from the PIN Arthropod Laboratory. There has also been close cooperation for many years with colleagues from Kraków—Professors Wiesław Krzemiński and Ewa Krzemińska (Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków), when the collections of the Museum and the Arthropod Laboratory were jointly used in some publications.

Yuri A. Popov became one of the founders of the higher classification of true bugs. In 1968 and 1971, he established three of the seven universally recognized infraorders of the Heteroptera (Nepomorpha, Gerromorpha, and Leptopodomorpha). He has greatly contributed to the development of the systematics and phylogeny of nepomorphans and leptopodomorphans. The work by Yuri A. Popov has shed light on the origin and evolution of moss bugs—Coleorrhyncha a relictual group of unclear relationships, which has survived until now only on the Southern Hemisphere. In particular, he was the first to demonstrate the wide distribution and important role of the Coleorrhyncha during the Mesozoic. He took part in numerous expeditions to Central Asia and Kazakhstan, Siberia, and Mongolia, and in 1976–1981 he was head of the Joint Soviet-Mongolian palaeontological expedition.

Throughout his life Yuri A. Popov studied fossil Heteroptera, primarily water and semiaquatic bugs; later, he mostly focused on the bugs in Cenozoic and Cretaceous fossil resins, especially assassin bugs, lace bugs, and leaf bugs. He has discovered and described the oldest representatives of flat bugs, lace bugs, burrowing bugs, and some other families.

The wide erudition and knowledge of Yuri A. Popov, encompassing the modern world fauna and the entire diversity of fossil Heteroptera, made him a universally recognized authority on the extinct true bugs. Many experts on this group consider him as their teacher and mentor. He has erected 8 families, 12 subfamilies, 15 tribes, over 100 genera and nearly 200 fossil and recent species of Hemiptera. Yuri A. Popov is the author of more than 170 publications, including several book chapters and monographs on the above groups. Several dozen species and genera and one family of fossil insects have been named in his honor by colleagues. He regularly participated in the traditional international meetings held during the International Amber Fairs “Amberif” in Gdańsk, where specialists in the study of organic remains, inclusions in Baltic amber gathered. Yuri A. Popov participated in and presented reports to the dozens of international conferences and meetings devoted to entomology, palaeoentomology and amber, including congresses of International Palaeoentomological Society. He was a member of the Russian Entomological Society, the Russian Palaeontological Society, the Moscow Society of Naturalists, the Russian Bird Conservation Union, the Polish Taxonomical Society, and the Arbeitskreis Bernstein. He was a founding member of International Palaeoentomological Society and awarded the Honorary Lifetime Membership in 2010, during the Congress in Beijing.

Selected publications:

- Popov, Yu.A. (1962) Order Heteroptera. True bugs. Families Notonectidae Leach, 1815; Dipsocoridae Dohrn, 1859; Cydnidae Billberg, 1820. *In: Rohdendorf, B.B. (Ed.), Fundamentals of Palaeontology, Arthropoda Tracheata and Chelicerata*, 9. Moscow, pp. 214–215, 217, 224 [In Russian].
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- Popov, Yu.A. & Shcherbakov, D.E. (1996) Origin and evolution of the Coleorrhyncha as shown by the fossil record. *In: Schaefer, C.W. (Ed.), Studies on Hemipteran phylogeny. Proceedings of Thomas Say Publications in Entomology, Entomological Society of America, Lanham, Maryland*, pp. 9–30.
- Shcherbakov, D.E. & Popov, Yu.A. (2002) 2.2.1.2.5. Superorder Cimicidea Laicharting, 1781, Order Hemiptera Linné, 1758. The bugs, cicadas, plantlice, scale insects, etc. (= Cimicida Laicharting, 1791 = Homoptera Leach, 1815 + Heteroptera Latreille, 1810). *In: Rasnitsyn, A.P. & Quicke, D.L.J. (Eds), History of insects*. Dordrecht, Kluwer, pp. 143–157.
- Popov, Yu.A. & Bechly, G. (2007) Heteroptera: bugs. *In: Martill, D.M., Bechly, G. & Loveridge, R.F. (Eds), The Crato fossil beds of Brazil—a window into an Ancient World*. Cambridge University Press, Cambridge, pp. 317–328.
- Popov, Yu.A., Kosmowska-Ceranowicz, B., Herczek, A. & Kupryjanowicz, J. (2011) Review of true bugs (Insecta: Hemiptera, Heteroptera) from the amber collection of the Museum of the Earth of PAS in Warsaw with some remarks on heteropteran insects from Eocene European amber. *Polish Journal of Entomology*, 80 (4), 699–728.
- Golub, V.B. & Popov, Yu.A. (2016) Historical development and problems of classification of true bugs of the superfamily Tingoidea (Hemiptera: Heteroptera, Cimicomorpha). *Meetings in memory of N.A. Kholodkovsky*, 66, 1–93. [In Russian with English summary].

Szwedo, J., Drohojowska, J., Popov, Yu.A., Simon, E. & Wegierek, P. (2019) Aphids, true hoppers, jumping plant-lice, scale insects, true bugs and whiteflies (Insecta: Hemiptera) from the Insect Limestone (latest Eocene) of the Isle of Wight, UK. *Earth and Environmental Science Transactions of the Royal Society of Edinburgh*, 110 (3–4), 331–396.

André Nel (Fig. 9), born in 4th of November 1959 in La Ciotat, Bouches-du-Rhône, Provence-Alpes-Côte d’Azur, France, is currently Professor, biologist, zoologist, entomologist, working on entomology, with a strong emphasis on comparative morphology and fossil insects, insect fauna from the Palaeozoic, insect faunas in Cretaceous and Cenozoic ambers and lacustrine deposits. Interests in palaeoentomology, theoretical phylogeny, palaeoecology of terrestrial environments.

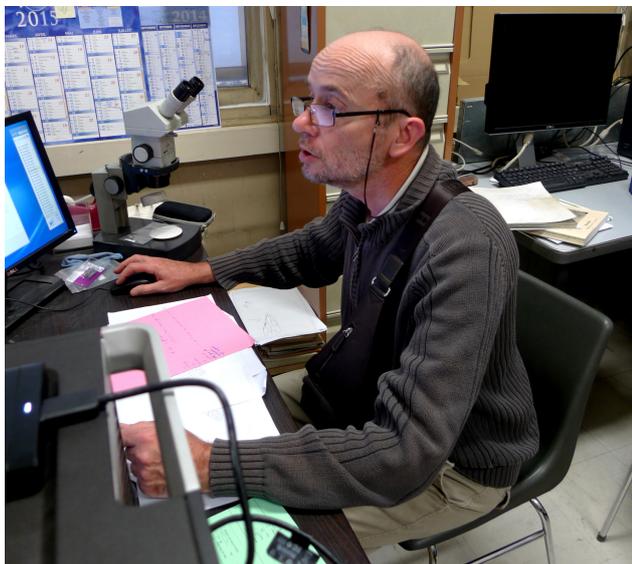


FIGURE 9. André Nel in his laboratory, 2015. Photo: Diyang Huang.

Since 1994 to 2013 he was Assistant Professor, 2013–2017 Full Professor in Institut Systématique Evolution Biodiversité (ISYEB), he works also in Muséum national d’Histoire naturelle, CNRS, Sorbonne Université, Université des Antilles, EPHE, Paris, in 1983–1994 he was Professor (‘agrégation’) of Mathematics in secondary school and Professor of Mathematics in high school since 1983 to 1984.

André Nel is the first author or the senior author on 80% of 752 published scientific works and over 40 communications in congresses, reviewer of over 430 articles for journals, between 1983 and 2021 average 22 papers per year in the journals like *Nature*, *Nature Communications*, *Communications Biology*, *PNAS*, *Gondwana Research* or *Scientific Reports*, *Palaeontology* or *Systematic Entomology*. He published 564 articles in peer-reviewed journals with impact factors and nine monographs, cited over 10000 times (over 6580 since 2016) and reached H-index of 47 (August, 2021).

André Nel received several awards and prizes like “Prix Pesson” and “Prix Gadeau de Kerville” from the “Société Entomologique de France”, “Prix Balachowski” from the prestigious French Académie des Sciences or Medal of the International Palaeoentomological Society for Honorary Member (since 2016) of the International Palaeoentomological Society (IPS).

He has been the scientific manager of the one of World’s largest collections of terrestrial arthropods in Muséum national d’Histoire naturelle (MNHN) as well as collection of fossil insects that he enable it to become one of the most important in the world. He has gathered huge fossil insects collections from several French outcrops and enriching the collection of the MNHN. He has lead and participate in field expeditions in France (Aix-en-Provence, Oise, Luberon, Céreste, Saint Bauzile, Charente Maritime, Menat, etc.), Mauritania, Lebanon, Isle of Wight, Spain, Norway (Spitzbergen), New Caledonia. He is also one of the pioneers in the use and exploration of new analyzing techniques like 3D analysis of different age of amber inclusions by tomography. Made significant new records and identified fossil insects, what contributes to an improvement of current knowledge on their evolution and diversity.

André Nel took part in international conferences *e.g.*, in Spain (1998, 2007), China (2010), Lebanon (2013), Great Britain (2016).

Selected publications:

- Garrouste, R., Clément, G., Nel, P., Engel, M.S., Grandcolas, P., D’Haese, C., Lagebro, L., Denayer, J., Gueriau, P., Lafait, P., Olive, S., Prestianni, C. & Nel, A. (2012) A complete insect from the Late Devonian: shrinking the ‘hexapod gap’. *Nature*, 488 (7409), 82–85.
- Huang, D.Y., Engel, M.S., Cai, C.Y., Wu, H. & Nel, A. (2012) Diverse transitional giant fleas from the Mesozoic of China. *Nature*, 483 (7388), 201–204.
- Huang, D.Y., Nel, A., Cai, C.Y., Lin, Q.B. & Engel, M.S. (2013) Amphibious flies and paedomorphism in the Jurassic period. *Nature*, 495 (7439), 94–97.
- Nel, A., Roques, P., Nel, P., Prokin, A.A., Bourgoïn, T., Prokop, J., Szwedo, J., Azar, D., Desutter-Grandcolas, L., Wappler, T., Garrouste, R., Coty, D., Huang, D.Y., Engel, M. & Kirejtshuk, A.G. (2013) The earliest-known holometabolous insects. *Nature*, 503 (7475), 257–261.
- Huang, D.Y., Bechly, G., Nel, P., Engel, M.S., Prokop, J., Azar, D., Cai, C.Y., van de Kamp, T., Staniczek, A.H., Garrouste, R., Krogmann, L., dos Santos Rolo, T., Baumbach, T., Ohlhoff, R., Shmakov, A.S., Bourgoïn, T. & Nel, A. (2016) New fossil insect order Permopsocida elucidates major radiation and evolution of suction feeding in hemimetabolous insects (Hexapoda: Acercaria). *Scientific Reports*, 6, 23004, 1–9.
- Garrouste, R., Hugel, S., Jacquelin, L., Rostan, P., Steyer, J.-S., Desutter-Grandcolas, L. & Nel, A. (2016) Insect mimicry of

plants dates back to the Permian. *Nature Communications*, 7, 13735, 1–6.

Zheng, D.R., Nel, A., Jarzembowski, E.A., Chang, S.C., Zhang, H.C., Xia, F.Y., Liu, H.Y. & Wang, B. (2017) Extreme adaptations for probable visual courtship behaviour in a Cretaceous dancing damselfly. *Scientific Reports*, 7, 44932, 1–8.

Zheng, D.R., Nel, A., Wang, H., Wang, B., Jarzembowski, E.A., Chang, S.C. & Zhang, H.C. (2017) The first Late Triassic Chinese triadophlebiomorph (Insecta: Odonoptera): biogeographic implications. *Scientific Reports*, 7 (1), 1476, 1–7.

Desutter-Grandcolas, L., Jacquelin, L., Hugel, S., Boistel, R., Garrouste, R., Henrotay, M., Warren, B.H., Chintauan-Marquier, I.C., Nel, P., Grandcolas, P. & Nel, A. (2017) 3-D imaging reveals four extraordinary cases of convergent evolution of acoustic communication in crickets and allies (Insecta). *Scientific Reports*, 7 (1), 7099, 1–8.

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Jacquelin, L., Desutter-Grandcolas, L., Chintauan-Marquier, I., Boistel, R., Zheng, D.R., Prokop, J. & Nel, A. (2018) New insights on basiventral sclerites using 3D tools and homology of wing veins in Odonoptera (Insecta). *Scientific Reports*, 8 (1), 238, 1–7.

Nel, P., Bertrand, S. & Nel, A. (2018) Diversification of insects since the Devonian: a new approach based on morphological disparity of mouthparts. *Scientific Reports*, 8 (1), 3516, 1–45.

Nel, A., Prokop, J., Pecharová, M., Engel, M.S. & Garrouste, R. (2018) Palaeozoic giant dragonflies were hawk predators. *Scientific Reports*, 8 (1), 12141, 1–5.

Schubnel, T., Legendre, F., Roques, P., Garrouste, P., Cornette, R., Perreau, M., Perreau, N., Desutter-Grandcolas, L. & Nel, A. (2021) Sound vs. light: wing-based communication in Carboniferous insects. *Communications Biology*, 4 (794), 1–11.

Nel, A. (2021) Maastrichtian representatives of the dragonfly family Aeschniidae question the entomofaunal turnover of the early Late Cretaceous. *Palaeoentomology*, 4 (3), 209–212.

Nel, A. (2021) Impact of the choices of calibration points for molecular dating: a case study of Ensifera. *Palaeoentomology*, 4 (3), 228–230.

Diying Huang (Fig. 10), was born on 15th February, 1975 in Beijing. He grew up in Zhongguancun, the ‘Science Hub’ of China, with dozens of scientific research institutes around China’s most famous universities. In such an atmosphere, he has been fascinated by natural sciences since he was a child, especially geology. After finishing

high school, he left Beijing to study in the Department of Earth Sciences of Nanjing University. As he was good at discovering fossils during his internship at the university, he became interested in palaeontology, and used the winter and summer vacations to collect numerous insect fossils from the Early Cretaceous Lushangfen Entomofauna in western Beijing, and published scientific papers when he was an undergraduate. After graduating in 1997, he was assigned to the Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences (CAS). He started as a Research Assistant and has been working as an Assistant Professor, Associate Professor, Professor, and CAS Distinguished Professor.

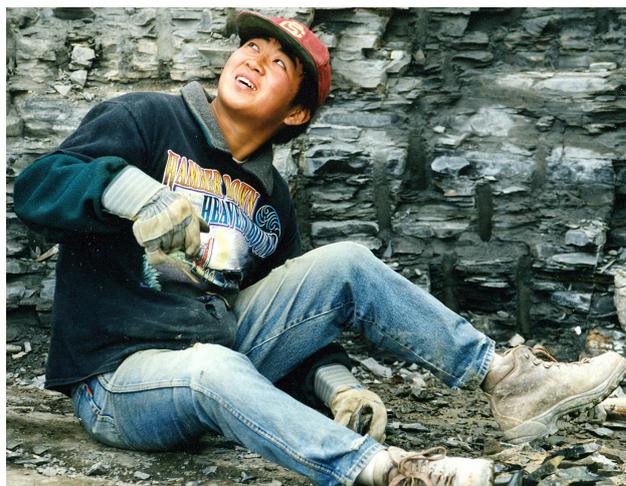


FIGURE 10. Diying Huang, excavating Burgess Shale fossils in British Columbia, Canada, August, 2000. Photo: Jean-Bernard Caron.

At the beginning of his career, he joined the research group on the Chengjiang biota and Cambrian Explosion. During this period, he spent most of his time in the field station in Kunming, Yunnan. He organized the excavation of numerous Cambrian exceptional fossils, and conducted research on some important animals, and achieved important progress. For example, he studied the morphology and anatomy of *Haikouella*, which provided evidence for the origin and early evolution of vertebrates. He, with his colleagues, also reported the oldest chaetognath (arrow worm), the oldest tunicate, the oldest sipunculan (peanut worm), and the Cambrian shell-less mollusks, providing insights for understanding two types of problematic fossils in the Burgess Shale. In 2000, he did his PhD at University Lyon 1, where he conducted a systematic study on vermiform animals, especially Priapulida, from the Chengjiang biota. Later, he also discovered many Cambrian non-mineralized biota on the North China Platform, and conducted continuous research on the Cambrian exceptional faunas, including a recent discovery of a transitional form of euarthropods (*Kylinxia*).

Meanwhile, he did not give up his palaeontological research. After obtaining his PhD in January, 2005, he focused on Mesozoic insects. He discovered 24 insect orders from the Middle-Late Jurassic Daohugou biota, making it one of the most diverse biotas in the world, and pushed back the earliest fossil records of several insect orders. He also studied branchiopods and arachnids, among other animal groups in Daohugou Biota. Recently, he has been focused on the relationships between insects and vertebrates in geological history, and has made remarkable progress: he and his colleagues discovered diverse giant fleas from the Middle Jurassic and Early Cretaceous, and revealed that the fleas originated from siphonate Mecoptera; overturned the hypothesis that *Strashila* are parasites, but belong to the Diptera, and revealed its unique neoteny and peculiar living habits. Based on the ultrastructures of the Mesozoic carrion beetles, he and his colleagues found evidence that the Jurassic silphids were the oldest known scavengers, and reveals the origin of the parental care of silphids. He pioneered the Burmese amber bioinclusion research in China. He and his colleagues discovered a long-tailed spider, representing an important missing link of spider evolution, and reported a diversity of Mesozoic mushrooms and mushroom feeders.

In recent years, he has done a lot of field work and proposed a new time framework for the terrestrial Jurassic of China. His insights into the divisions of stratigraphy and biological assemblages of the Yanliao biota have been widely accepted. He also did a lot of work on the stratigraphic division and isotope dating related to the Yanshan Movement.

Dying Huang has published more than 350 research papers. He has won the first prize of Science and Technology Award of Jiangsu Province (Insect fossils from the middle-late Mesozoic Daohugou and Jehol biotas), and the first prize of Science and Technology Progress Award of Jiangsu Province (Origin and early evolution of vertebrates), the Young Scientist Award of CAS (2013), the International Cooperation Award of Young Scientists of CAS (2014), the Top Ten Young Scientists of Jiangsu Province (2010), and the Huang Jiqing Young Geologist Award (2020). He won the Excellent Youth Science Fund and Outstanding Youth Science Fund projects of the National Science Foundation of China, and was selected as a leading talent for National High-level Talent Special Support Program and Young and Middle-aged leaders of Science and Technology Innovation of the Ministry of Science and Technology of China. He is an election committee member of the Jurassic subcommission of the International Commission on Stratigraphy and a communication committee member of the Cambrian subcommission. In 2018, he was entrusted by the International Palaeontological Society (IPS) to establish the society's official publication *Palaeoentomology*. In addition, he is on the editorial

board of *Cretaceous Research*, *Science Bulletin*, *Journal of Stratigraphy*, *Vertebrata Palasiatica*, and *Insects*. He was elected an honorary member of IPS at the 8th Fossil X3 Conference in Dominican Republic in 2019 and won the hosting right for the 9th Fossil X3 Conference in Xi'an, China.

Selected publications:

- Chen, J.Y., Huang, D.Y. & Li, C.W. (1999) An early Cambrian craniate-like chordate. *Nature*, 402, 518–522.
- Chen, J.Y., & Huang D.Y. (2002) A possible Lower Cambrian chaetognath (arrow worm). *Science*, 298, 187.
- Chen, J.Y., Huang, D.Y., Peng, Q.Q., Chi, H.M., Wang, X.Q. & Feng, M. (2003) The first tunicate from the Early Cambrian of South China. *Proceedings of the National Academy of Sciences, USA*, 100, 8314–8318.
- Huang, D.Y., Chen, J.Y., Vannier, J. & Saiz Salinas J.I. (2004) Early Cambrian sipunculan worms from southwest China. *Proceedings of the Royal Society of London B*, 271, 1671–1676.
- Chen, J.Y., Huang, D.Y. & Bottjor, D. (2005) An Early Cambrian problematic fossil: *Vetustovermis* and its possible affinities. *Proceedings of the Royal Society of London B*, 272, 2003–2007.
- Huang, D.Y., Engel, M.S., Cai, C.Y., Wu, H. & Nel, A. (2012) Diverse transitional giant fleas from the Mesozoic era of China. *Nature*, 483, 201–204.
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- Huang, D.Y., Cai, C.Y., Fu, Y.Z. & Su, Y.T. (2018) The Middle-Late Jurassic Yanliao entomofauna. *Palaeoentomology*, 1 (1), 3–31.
- Huang, D.Y., Hormiga, G., Cai, C.Y., Su, Y.T., Yin, Z.J., Xia, F.Y. & Giribet, G. (2018) Origin of spiders and their spinning organs illuminated by mid-Cretaceous amber fossils. *Nature Ecology & Evolution*, 2 (4), 623–627.
- Huang, D.Y. (2019) Jurassic integrative stratigraphy and timescale of China. *Science China—Earth Sciences*, 32 (1), 223–255.
- Zeng, H., Zhao, F.C., Niu, K.C., Zhu, M.Y. & Huang, D.Y. (2020) An early Cambrian euarthropod with radiodont-like raptorial appendages. *Nature*, 588, 101–105.

Lian, X.N., Cai, C.Y. & Huang, D.Y. (2021) The early assemblage of Middle–Late Jurassic Yanliao biota: checklist, bibliography and statistical analysis of described taxa from the Daohugou beds and coeval deposits. *Palaeoentomology*, 4 (2), 95–136.

Anthony [Tony] Alexander Mitchell (Fig. 11), was born in Kendal, Westmorland in 1940. In collaboration with others (David and Martin Rayner and Fred Clouter), he produced the book ‘London Clay Fossils of the Isle of Sheppey’ and its sequel, in color, ‘London Clay Fossils of Kent and Essex’ in 2009, covering the identification of most common species. He created the 2013 online edition of EDNA, a well-used palaeoentomological database.

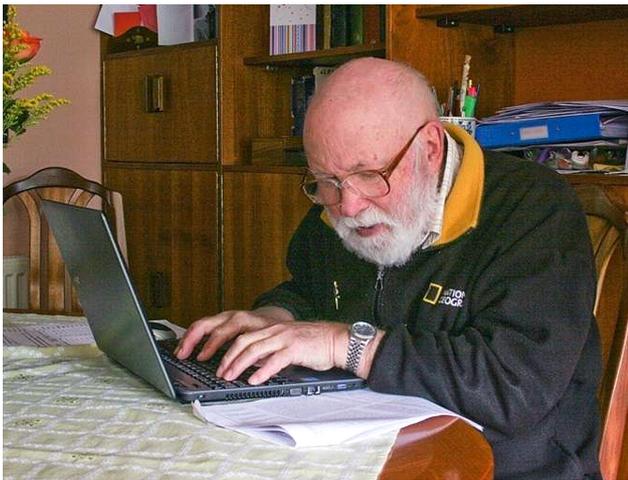


FIGURE 11. Tony Mitchell at work. Photo: Ed Jarzembowski.

He attended the Cambridge and County High School for Boys, then worked in the Cambridge Public Health Laboratory, followed by research at the Agricultural Research Council at Babraham Hall under Professor Sir John Gaddum FRS. Finally, he went to Keswick Hall Teachers Training College. Then he started a 30-years teaching career at Woodlands Secondary School, Gillingham, Kent, becoming Head of Science. When the Open University was formed, Tony became a student in the first year’s intake. He graduated with a BA 3 years later. Asked to give a talk on geological maps to Medway Lapidary and Mineral Society [now Medway Fossil and Mineral Society], he did, and joined, later becoming Chairman and then President. Through it, he joined the GA, and on field trips met Edmund Jarzembowski.

Tony had become interested in databases, starting with the ZX81 and Spectrum, and taught himself how to use Microsoft Access. Earlier, Edmund had asked Edna Clifford to produce a card index file of newly described fossil insects, which had become unwieldy, and Tony volunteered to turn it into EDNA, the Fossil Insect Database. This included full taxonomy, provenance, geology, age, author, and publication for the holotype. He now needed the original data on new species which lead to scouring Maidstone Museum for papers.

Then he was offered early retirement, as the school

was greatly reduced in numbers after a new school was built, closer to the local population center. He could now spend one day a week in the Natural History Museum libraries collecting more fossil insect data. EDNA was published online by the Palaeontological Society as a detailed, freely-accessible database and is currently being transferred to GBDB hosting.

Since 2019, Anthony A. Mitchell has been an Honorary Member of the International Palaeoentomological Society.

Selected publications and works:

Clouter, F.H., Mitchell, T., Rayner, D. & Rayner, M. (2000) *London Clay Fossils from the Isle of Sheppey A Collector’s Guide to the Fossil Animals from the London Clay between Minster and Warden Point*. Medway Lapidary & Mineral Society, Gillingham, Kent, 100 pp.

Rayner, D., Mitchell, T., Rayner, M. & Clouter, F. (2009) *London Clay Fossils of Kent and Essex*. Medway Lapidary & Mineral Society, Rochester, Kent, 228 pp.

Mitchell, A.A. (2013) EDNA, The Fossil Insect Database <https://fossilinsectdatabase.co.uk/>

Jacek Szwedo (Fig. 12), was born on 10th December, 1966 in Chorzów (Poland), is currently a Professor at the University of Gdańsk, Head of Laboratory of Evolutionary Entomology and Museum of Amber Inclusions, at Department of Invertebrate Zoology and Parasitology, Faculty of Biology, University of Gdańsk, Gdańsk (Poland). He achieved his PhD in 1997 in University of Silesia, Katowice (Poland). He received his habilitation in biological sciences (a level more or less equal to Doctor of Science) in 2013 from the Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw (Poland). His expertise on amber and fossil insects is wide and includes several groups. He supervised and co-supervised several MScs and PhDs among which three PhDs are in progress.



FIGURE 12. Jacek Szwedo during field excursion to Daohugou, 2010. Photo: J. Szwedo archive.

He is a founder member (2001) of the International Palaeontological Society and its current President (since April 2019). He was appointed the honorary lifetime membership of the IPS in 2019 [during the 8th Fossils X3 meeting, the 8th International Conference on Fossil Insects, Arthropods & Amber, Santo Domingo (Dominican Republic)]. He served as Member of Scientific Board (2007–2016), Treasurer (2010–2016) and Vice-President (2016–2019) of IPS. In 2018, together with Dying Huang and Dany Azar founded the official journal of IPS—*Palaeontology*, in which he serves as one of the editors.

He is also member of the World Amber Council, current Deputy President of International Amber Association, IAA Amber Expert in expertise on natural amber specimens and amber inclusions and member of the IAA Amber Experts Commission, former member of the Board of IAA, member of the Board of Administrators and Treasurer of International Auchenorrhyncha Society, member of the Standing Committee for the International Auchenorrhyncha Congresses, former President of Polish Taxonomical Society, Editor for *Zootaxa* (Fulgoromorpha, pars) and member of the Editorial Board of *Megataxa*, Member of the Catalog of Life Global Team, member of the Board of Silesian Entomological Society, Editor in Chief of *Acta entomologica silesiana* (journal of SES), member of the Editorial Boards of *Annals of the Upper Silesia Museum* (Entomology), *Annals of the Upper Silesia Museum* (Natural History) and *Monographs of the Upper Silesia Museum*. He was a Visiting Professor in the Muséum national d'Histoire naturelle, Paris, France, and Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, Nanjing, China. He is one of organizers of the meetings of the Palaeontological Section of the Polish Entomological Society, during the International Amber Fairs Amberif. He published over 200 scientific papers and nearly 130 published congresses abstracts, cited over 2600 times (GS), H-index = 17 (WoS).

He is working also on Recent insects—Hemiptera: Fulgoromorpha and Cicadomorpha, their taxonomy, systematic, morphology, evolution and phylogeny, ecology and biodiversity. He has undertaken field works and expertise on Recent and fossil insects and amber in many institutions and countries (Austria, Belgium, Brazil, Bulgaria, China, Czechia, Denmark, Dominican Republic, France, Germany, Greece, Hungary, Italy, Lebanon, Russia, Slovakia, South Africa, Spain, United Kingdom, U.S.A., and Vietnam).

He received several awards: in 2005—Prix Constant from Société Entomologique de France; in 2015—Medal of the Mayor of the City of Gdańsk, in tribute to and as thanks for entanglement of promotion of amber and City

of Gdańsk as World Capital of Amber; in 2018—Amber Personality of the Year 2017 from International Amber Association and Award Committee; in 2019—Award of Recognition from International Palaeontological Society.

During his service in managing bodies, the IPS was officially registered; on his initiative 21st April of each year is celebrated as the World Hemiptera Day.

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Acknowledgements

I would like to acknowledge for help in preparation of this work to Dany Azar, Aleksander Herczek, Christel and Hans Werner Hoffeins, Diying Huang, Edmund A. Jarzembowski, Małgorzata Kalandyk-Kołodziejczyk, Iwona Kania, Paweł Koteja, Ewa Krzemińska, Wiesław Krzemiński, Jakub Prokop, Alexandr P. Rasnitsyn, Elżbieta Sontag, Ryszard Szadziwski and Piotr Węgierek.

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