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Palaeoentomology: a summary of 2018–2023

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The historical background for founding *Palaeoentomology* was already discussed in Azar *et al.* (2018) and some bibliometric data were summarized in Zhang (2023). Here we share further details and our experiences in the early days during the founding of this journal in the hope that these may benefit other professional societies who may wish to develop their own journals. We updated bibliometric data to the end of 2023 and summarized new taxa described in the journal during the last six years. We also highlighted the importance of media in communicating science to the general public and outlined some minor changes in the editorial structure and process from 2025.

Founding of the journal

In 2017, Professor Dany Azar, the then President of the International Palaeoentomological Society (IPS), entrusted the senior author (DYH) with the task of founding an official journal for the society. Although DYH knew this was a very challenging task, given that the society's previous efforts had not been successful, he resolutely agreed to take it on. He then contacted several internationally renowned publishers, but because we are a small society representing a highly specialized field, only one publisher expressed an interest in our project. DYH held several rounds of negotiations with a representative of this publisher in China in Nanjing and Beijing; they agreed on the title of the journal (*Palaeoentomology*) but not on the start year and cost. The publisher suggested to launch the journal in 2020, with it being a quarterly publication. DYH proposed that the journal should be launched before the 8th International Conference on Fossil Insects, Arthropods and Amber (FossilX3 Conference), which would be held in the Dominican Republic in 2019, as this conference could greatly help in promoting the journal. Next came the issue of costs. To publish a niche journal like

ours, the publisher required a substantial amount of funding to cover the first four years of operations. Due to the financial situation, IPS could not contribute any funds to the journal, and the financial support from the Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences (NIGPAS) was very limited, far from sufficient to cover the significant costs. We applied for a reduction in fees in early summer 2018, but at the end of September 2018, the publisher informed DYH that it could not reduce the fees. In the moment of uncertainty, DYH thought of a friend—Professor Zhi-Qiang Zhang (ZQZ), the chief editor of *Zootaxa*. In the summer of 2018, ZQZ visited DYH in Nanjing for discussion on collaborative research on mites in Burmese amber. DYH mentioned the efforts of IPS to establish *Palaeoentomology*. ZQZ said that if IPS encountered difficulties in launching the journal, he might be able to help. So in late September 2018, DYH contacted ZQZ about difficulties in founding *Palaeoentomology*. With ZQZ's support, Magnolia Press (publisher of *Zootaxa*) agreed to publish *Palaeoentomology* for the society free of charge. NIGPAS, as the journal's host institute, set up an editorial office, hired a page editor, provided funding for English editing, covered the Open Access fees for some members, and offered print copies to a few scholars and institutions. Thanks to ZQZ's strong support, the preparation work for *Palaeoentomology* moved forward quickly. To ensure the journal would be indexed by Web of Science as soon as possible, ZQZ suggested launching the journal in 2018, with six issues per year, effectively making it a bimonthly publication. He also proposed that the journal adopt a fully Open Access model. However, given the limited manuscript submissions in the early stages and the limited funding DYH could secure, the journal ultimately adopted a hybrid publishing model: print plus online (not freely accessible). Coincidentally, at

that time, Professor Dany Azar, the President of IPS, and Professor Jacek Szwedo, the Vice President of IPS, were both in Nanjing. Together, the three began preparing all the documentation for the journal's launch. *Palaeoentomology* was officially launched in mid-November 2018 (Azar *et al.*, 2018). DYH and Professor Dany Azar served as the editors-in-chief, with professors Jacek Szwedo and Dr Neal Evenhuis (an outstanding English editor and also a member of the International Commission on Zoological Nomenclature) serving as associate editors.

Development

Since the first issue, it has become apparent that running a journal is far more challenging than initially imagined. Although we were prepared, the need to publish the first issue by the end of 2018, within just one and a half months, rather than the originally planned 2020, came as a surprise. We did our utmost and finally succeeded in publishing the first issue right before the end of 2018. Despite some confusion in manuscript editing, particularly in mastering the required formatting guidelines of the journal, the fundamental tasks were nevertheless accomplished. In the subsequent years, the publication of the journal did not proceed smoothly, with the primary issue being a lack of submissions. Consequently, we organized several special issues to alleviate this problem. Some of these were quite successful, while others fell short of securing enough papers, forcing us to solicit articles at the last moment. This has been a persistent issue—with no solid backlog of manuscripts, two months of effort would only barely meet the volume required for that issue. If the submissions fell short, additional efforts to source manuscripts were needed. Just after one issue was published, finding papers for the next issue became a new challenge. By 2022, the submission volume had declined further, making it difficult to maintain the journal.

From the third year, ZQZ took charge of liaising with Web of Science for journal indexing, but the process turned out to be far longer than anticipated. Encouragingly, on November 3, 2022, *Palaeoentomology* was indexed in Clarivate's Emerging Sources Citation Index (ESCI) in the Web of Science Core Collection, and all articles since the journal's inception were retrospectively included in the ESCI database (Fig. 1). This also led to the Journal Impact Factor ranking in the June 2023 edition of *Journal Citation Reports* or JCR in short (Zhang, 2023). Indeed, in June 2023, *Palaeoentomology* received its first Impact Factor of 2.3, ranking 8th among 57 SCI-indexed journals in palaeontology and 20th among 108 SCI-indexed journals in entomology, both within the JCR's Q1 category. This milestone significantly improved the journal's submission volume. In June 2024, *Palaeoentomology* received a second Impact Factor of 1.9, ranking 12th among 56 palaeontology journals and 30th among 109 entomology

TABLE 1. Author name followed by number of published/indexed items.

Rank	Author names	Number of published items
1	Huang, Diying	81
2	Nel, André	78
3	Azar, Dany	46
4	Cai, Chenyang	45
5	Jouault, Corentin	23
6	Fu, Yanzhe	22
7	Maksoud, Sibelle	21
8	Perkovsky, Evgeny E.	18
9	Tihelka, Erik	15
10	Szwedo, Jacek	14
11	Rasnitsyn, Alexandr	12
12	Heiss, Ernst	11
13	Zhang, Haichun	11
14	Engel, Michael S	11
15	Su, Yitong	9
16	Garrouste, Romain	9
17	Lian, Xinneng	9
18	Hakim, Marina	9
19	Ren, Dong	9
20	Ross, Andrew J.	9

journals, making it a Q1 journal in paleontology and a Q2 journal in entomology.

In the key development stages of *Palaeoentomology*, special thanks must be given to two scientists. One is Professor André Nel from the Muséum National d'Histoire Naturelle, who not only submitted numerous manuscripts to the journal but also undertook a significant amount of peer review work (Table 1). It can be said that without Professor Nel's help, the journal would have struggled to succeed. The other is Dr Andrew Ross from the National Museum of Scotland, who published a species checklist of Burmese amber in 2019 and continued to update it in the first issue of each year thereafter. His work has been widely cited and made an important contribution to the journal's citation counts (Table 2). At the 9th International Conference on Fossil Insects, Arthropods and Amber held in Xi'an, China, in 2024, the journal awarded Professor Nel the Best Contribution Award and Dr Ross the Best Citation Award.

From 2018 to 2023, *Palaeoentomology* published 31 issues in 6 volumes, including a total of 391 papers by 200 authors from 40 countries and 197 research institutions (Table 3). These contributions described 247 new species, 129 new genera, 3 new tribes, 7 new subfamilies, 6 new families, and 1 new infraorder (Fig. 2).

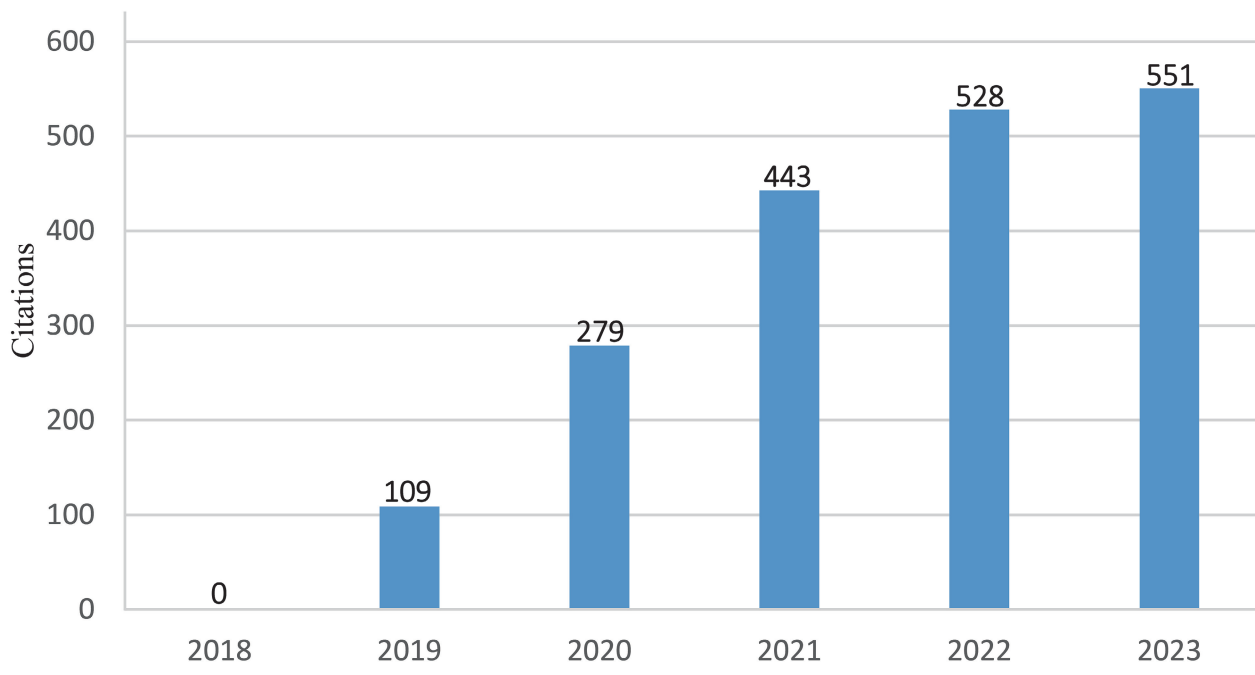


FIGURE 1. Total cites to *Palaeoentomology* per year from 2018 to 2023 (data from Web of Science Core Collection as of 27 June 2024).

	sp. nov.	subgen. nov.	gen. nov.	tribe. nov.	subfam. nov.	fam. nov.	Infraorder. nov.	axon nov.	Total
2018	6	0	2	0	0	0	0	0	8
2019	66	0	33	1	1	1	0	0	102
2020	76	1	35	0	3	1	0	1	117
2021	61	0	25	1	3	6	1	1	98
2022	44	0	25	0	2	1	0	0	72
2023	84	0	29	1	0	1	0	0	115
Total	337	1	149	3	9	10	1	2	

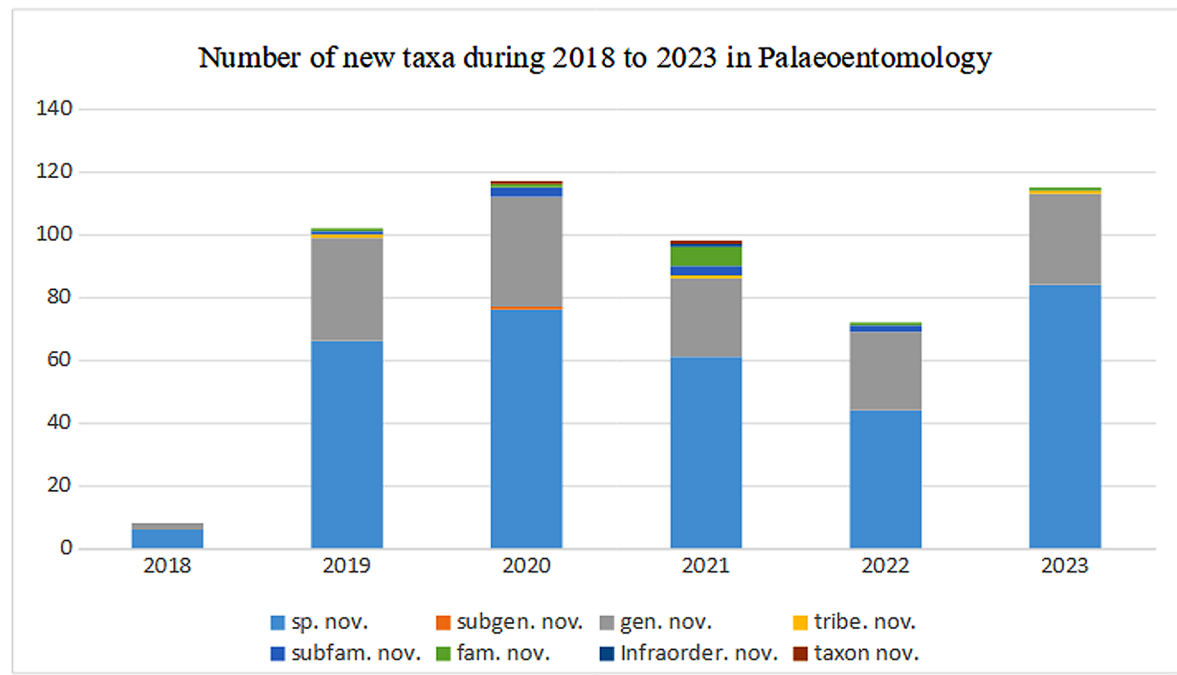


FIGURE 2. New taxa established in *Palaeoentomology* from 2018 to 2023.

TABLE 2. Top 15 papers in *Palaeoentomology* 2018 to 2023 by cites (data from Web of Science Core Collection as of 27 June 2024). Corresponding authors are marked with *.

	Title (document category)	Author(s)	Date / Volume & issue / Pages	Citations
1	Burmese (Myanmar) amber checklist and bibliography 2018 (Review)	Ross, AJ	Feb 2019 / 2 (1) / pp. 22–84	200
2	Various amberground marine animals on Burmese amber with discussions on its age (Article)	Mao, YY; Liang, K; Su, YT; Li, JG; Rao, X; Zhang, H; Xia, F.Y.; Fu, YZ; Cai, CY; Huang, DY*	Dec 2018 / 1 (1) / pp. 91–103	150
3	Supplement to the Burmese (Myanmar) amber checklist and bibliography, 2019 (Article)	Ross, AJ	Feb 2020 / 3 (1) / pp. 103–118	78
4	Supplement to the Burmese (Myanmar) amber checklist and bibliography, 2020 (Article)	Ross, AJ	Feb 2021 / 4 (1) / pp. 57–76	68
5	Application of confocal laser scanning microscopy to the study of amber bioinclusions (Article)	Fu, YZ; Li, YD; Su, YT; Cai, C.Y.; Huang, DY*	Jun 2021 / 4 (3) / pp. 266–278	53
6	Lebanese amber: latest updates (Review)	Maksoud, S & Azar, D*	Apr 2020 / 3 (2) / pp. 125–155	46
7	The Middle-Late Jurassic Yanliao entomofauna (Review)	Huang, DY*; Cai, CY; Fu, YZ; Su, YT	Dec 2018 / 1 (1) / pp. 3–31	42
7	Preparation of small-sized 3D amber samples: state of the technique (Article)	Sidorchuk, EA* & Vorontsov, DD	Dec 2018 / 1 (1) / pp. 80–90	42
7	International Palaeoentomological Society Statement (Editorial)	Szwedo, J; Wang, B; Soszyńska-Maj, A; Azar, D; Ross, AJ	Jun 2020 / 3 (3) / pp. 221–222	42
10	Remarks on the age of Dominican amber (Short Communication)	Iturralde-Vinent, MA* & Macphree, RDE	Jun 2019 / 2 (3) / pp. 236–240	32
11	Supplement to the Burmese (Myanmar) amber checklist and bibliography, 2021 (Article)	Ross, AJ	Jan-Feb 2022 / 5 (1) / pp. 27–45	31
12	Supplement to the Burmese (Myanmar) amber checklist and bibliography, 2022 (Article)	Ross, AJ	Feb 2023 / 6 (1) / pp. 22–40	22
13	Phylogenetic overview of flat wasps (Hymenoptera, Bethyloidea) reveals Elektropeyriinae, a new fossil subfamily (Article)	Colombo, WD*; Perkovsky, EE; Azevedo, CO	Jun 2020 / 3 (3) / pp. 269–283	20
14	Long-headed predators in Cretaceous amber-fossil findings of an unusual type of lacewing larva (Article)	Zippel, A*; Kiesmüller, C*; Haug, GT; Müller, P; Weiterschan, T; Haug, C; Haug, JT	Sep 2021 / 4 (5) / pp. 475–498	19
15	The early assemblage of Middle-Late Jurassic Yanliao biota: checklist, bibliography and statistical analysis of described taxa from the Daohugou beds and coeval deposits (Review)	Lian, XN; Cai, CY; Huang, DY*	Apr 2021 / 4 (2) / pp. 95–136	18

TABLE 3. Total papers published per year from 2018 to 2023 in *Palaeoentomology* with top 20 countries/institutions ranked by their total number of papers (data from Web of Science Core Collection as of 27 June 2024).

By year	Number of papers	By country (top 20)	Number of papers	By institution (top 20)	Number of papers
2023	73	PEOPLES R CHINA	173	CHINESE ACADEMY OF SCIENCES	153
2022	73	FRANCE	98	MUSEUM NATIONAL D HISTOIRE NATURELLE MNHN	92
2021	78	RUSSIA	72	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	90
2020	78	UK	70	SORBONNE UNIVERSITE	86
2019	78	USA	54	ECOLE PRATIQUE DES HAUTES ETUDES EPHE	80
2018	11	GERMANY	47	UNIVERSITE PSL	80
		LEBANON	44	RUSSIAN ACADEMY OF SCIENCES	63
		POLAND	25	LEBANESE UNIVERSITY	46
		UKRAINE	18	PALEONTOLOGICAL INSTITUTE OF THE RUSSIAN ACADEMY OF SCIENCES	39
		SPAIN	15	UNIVERSITY OF BRISTOL	34
		AUSTRIA	13	CNRS INSTITUTE OF ECOLOGY ENVIRONMENT INEE	30
		ITALY	10	CNRS NATIONAL INSTITUTE FOR EARTH SCIENCES ASTRONOMY INSU	27
		BRAZIL	8	UNIVERSITE DE RENNES	27
		AUSTRALIA	7	NATURAL HISTORY MUSEUM LONDON	24
		CZECH REPUBLIC	6	UNIVERSITY OF CHINESE ACADEMY OF SCIENCES CAS	23
		CANADA	5	NATIONAL ACADEMY OF SCIENCES UKRAINE	18
		JAPAN	5	UNIVERSITY OF SCIENCE TECHNOLOGY OF CHINA CAS	18
		ARGENTINA	4	SCHMALHAUSEN INSTITUTE OF ZOOLOGY OF NASU	17
		DENMARK	4	UNIVERSITE DE MONTPELLIER	16
		INDIA	4	FAHRENHEIT UNIVERSITIES	15
				INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT IRD	15
				UNIVERSITY OF GDANSK	15

Media promotion

One key principle in the development of the journal has been the dissemination of scientific knowledge to the general public. With the support of NIGPAS, several interesting papers published in the journal received substantial publicity.

A particularly noteworthy example occurred on October 17, 2020, when Argentinian palaeontologist Julián F. Petrulevičius submitted a paper titled *First argiolestid damselfly (Odonata: Zygoptera) from the late Palaeocene of Northwest Argentina*. He named the Zygoptera fossil *Librelula maradoniana* to express his admiration for the legendary footballer. Unfortunately, on November 25, 2020, Diego Maradona passed away. Recognizing the emotional significance and urgency of this work, Petrulevičius requested expedited publication. Understanding his sentiments and the importance of timely dissemination, four editors and associate editors collaborated swiftly to finalize the manuscript. The paper was published on the morning of November 26, New Zealand time, which was still the day of Maradona's passing in Argentina (Petrulevičius, 2020). Thanks to the rapid efforts of NIGPAS science writer Ms Jie Sheng and coordination with over 10 Chinese media outlets, the story of Petrulevičius honoring Maradona by naming the fossil *Librelula maradoniana* was quickly disseminated through hundreds of media platforms. Consequently, Petrulevičius, despite his lengthy name, became a well-known palaeontologist among many in China.

Another prominent example is the paper by Professor Paul Selden from the University of Kansas and colleagues, titled *The supposed giant spider Mongolarachne chaoyangensis, from the Cretaceous Yixian Formation of China, is a crayfish*, which exposed an erroneous case of a Jehol Biota crayfish being published as a giant spider (Selden *et al.*, 2019). This revelation, publicized by the NIGPAS science communication team, also became widely known. Additionally, the paper by Erik Tihelka and colleagues, *Fleas are parasitic scorpionflies* (Tihelka *et al.*, 2020), presented the intriguing finding that Siphonaptera (fleas) belong to Mecoptera (scorpionflies). This topic also garnered significant media attention. Numerous other papers published in *Palaeoentomology* have similarly been promoted through science communication efforts, not only in China but also in other countries where news reports often accompanied the first release of papers.

Changes for a better future

In August 2023, the journal further refined its classification system, a move anticipated to benefit future development

(Szwedo *et al.*, 2023). In April 2024, the 9th FossilX3 Conference was successfully held in Xi'an, China, where the organizers expressed gratitude to the many experts and scholars who contributed to the growth of *Palaeoentomology*. During the conference, an editorial board meeting was held, in which constructive discussions about the journal's future planning and development took place. The editorial board was subsequently reorganized, and beginning in 2025, the journal will replace the editorial board with an advisory committee and section editors. With our collective efforts, *Palaeoentomology* is poised to achieve even greater success.

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