Acta Palaeobotanica 65(2), 285–292, 2025
https://doi.org/10.35535/acpa-2025-0012

e-ISSN 2082-0259
ISSN 0001-6594

OBITUARY NOTICE

Danuta Zdebska (1946–2025)

GRZEGORZ PACYNA

Jagiellonian University, Faculty of Biology, Institute of Botany, Department of Taxonomy, Phytogeography and Palaeobotany, Gronostajowa 3, 30-387 Kraków, Poland;
e-mail: grzegorz.pacyna@uj.edu.pl, ORCID: 0000-0003-4365-3549

Received 16 October 2025; accepted for publication 8 December 2025

Phot. Archives of former Palaeobotanical Department of W. Szafer Institute of Botany PAS

Dr. habil. Danuta Zdebska died on July 24, 2025, after a long and serious illness, and was buried in Rakowicki Cemetery on July 29, 2025. With her passing we lost an outstanding Polish palaeobotanist and academic teacher. She was a wise mentor, gifted with a huge knowledge of natural science and guided by high moral standards.

Danuta Zdebska (née Broda) was born on January 5, 1946, in Kołobrzeg. From 1965 to 1970 she studied biology in the Faculty of Biology and Earth Sciences of the Jagiellonian University, with which she remained associated until her death. As early as during her master's studies she became interested in palaeobotany.

Danuta Zdebska's research focused mainly on Devonian flora. During her scientific career she described several Early Devonian plants based on material from deep boreholes (Zdebska 1972, 1978, 1982, 1986, 1993). She concentrated on the best-preserved and most promising material, choosing to investigate primarily pyritized remains with preserved internal structures, despite the fact that pyrite petrifactions are very difficult to process, are fragile, and require very time-consuming preparation methods. Despite these difficulties, the results she obtained were significant and are still cited in palaeobotanical papers worldwide. She focused on biological and evolutionary interpretations of the fossils she described. Her studies, which fully document Devonian plants with preserved anatomy, remain unique in Polish palaeobotany.

Danuta Zdebska was a student of the eminent Polish palaeobotanist Docent Dr. habil. Maria Reymanówna, with whom she shared not only a mentor–student relationship but also a sincere friendship. However, because Docent Reymanówna was employed at the Institute of Botany of the Polish Academy of Sciences, she was never Danuta Zdebska's formal supervisor. Danuta Zdebska prepared her master's thesis, "*Sawdonia ornata* (= *Psilophyton princeps*

var. *ornatum*) from Poland" under the official supervision of Prof. Dr. Jadwiga Dyakowska (published as Zdebska, 1972).

After graduation she worked for a year (1970–1971) as an assistant lecturer in the Institute of Botany of the Jagiellonian University. From 1972 to 1974 she pursued doctoral studies in that institution, and in 1975 she defended her doctoral dissertation, "Lower Devonian plants from drillings in the Bielsko–Andrychów area" (supervisor: Prof. J. Dyakowska) in the Faculty of Biology and Earth Sciences of the Jagiellonian University. Her doctoral work was published in 1982 in the prestigious journal *Palaeontology*; this was a remarkable achievement for Polish palaeontology during the difficult communist era.

In 1994 she earned her habilitation from the same Faculty on the basis of the thesis "The morphological and anatomical structure of Early Paleozoic plants and their evolutionary significance", which consisted of three publications (Zdebska 1986, 1993; Snigirevskaya et al., 1992). Danuta Zdebska's scientific achievements concerning Devonian plants were summarized in detail in a review by Pacyna and Barbacka (2022) so I will not repeat them here.

After obtaining her habilitation she broadened her research topics to include first Carboniferous and later Mesozoic floras.

Her interest in the Carboniferous flora was reflected in her long-term collaboration with Dr. Sławomir Florjan, a specialist in Carboniferous plant cuticles. Under her supervision, several master's theses were completed on Carboniferous plant cuticles and macrofossils, including my own master's thesis. I first met Danuta Zdebska in 1998 during the summer semester of my first year at university, in a plant systematics course. In my second year I approached her with the intention of preparing my master's thesis under her supervision. Fortunately, a few years earlier, a site with siderite concretions containing plant and animal remains had been discovered in Sosnowiec. In my thesis I described plants from this site and dated them on the basis of macrofloristic observations. Some of the results were later published in conference proceedings and in our 2012 paper (Pacyna and Zdebska, 2012). The Sosnowiec material contained not only sterile plant organs but also diverse spore-bearing cones of lycopsids, sphenopsids, fertile fern leaves, and pteridosperm pollen organs. This material, supplemented by other specimens of Carboniferous coalified reproductive structures, became the basis of my doctoral dissertation, which she supervised. Together we often visited the District Museum in Wałbrzych to examine the collection of Carboniferous plant reproductive organs gathered by Eufrozyn Sagan. Part of my doctoral results, concerning pteridosperm pollen organs, was later published with her in a 2010 monograph (Pacyna and Zdebska, 2010).

The second research direction she pursued in the early 2000s entailed the Mesozoic flora. Under her supervision a master's thesis on the flora from the Middle Jurassic Grojec clays and a doctoral dissertation on the Jurassic flora of Antarctica were completed (the latter later published as Birkenmajer and Ociepa, 2008). Together with S. Florjan she also gave a preliminary description of a new Cretaceous bennettitalean stem from Poland, collected by Zygmunt Holcer (Florjan and Zdebska, 2011).

The discovery in the 1990s of the Upper Triassic Krasiejów locality, rich in vertebrate bones and plant remains, by Prof. Jerzy Dzik, opened new perspectives for research on the Triassic flora in Poland. Prof. Dzik invited Danuta Zdebska to collaborate on a study of the Krasiejów flora. Thanks to his kindness, Danuta Zdebska and her students (including me) took part in several paleontological workshops he organized. Prof. Dzik's research has since been continued by his student, Prof. Tomasz Sulej, who has discovered further Upper Triassic sites. From a palaeobotanical perspective the most important of these is Patoka, from which we described – in collaboration with several other researchers – a new conifer species, genus, and family (Pacyna et al., 2018).

Plant remains from the Upper Triassic of Poland are usually well-preserved compressions but they are often highly fragmented. After dissolution of the sediment, identifying informative and well-preserved specimens requires painstaking and time-consuming selection under a stereomicroscope. Danuta Zdebska eagerly worked through these mesofossil samples, managing to find true rarities among countless fragments. It was truly Benedictine work, requiring enormous patience, but the results were spectacular.

She loved fieldwork and fossil collecting; in these activities she was devoted to the idea of

creating a significant palaeobotanical collection at the Jagiellonian University. We went together on numerous trips to Upper Carboniferous and Upper Triassic sites in Upper Silesia, as well as to Lower Jurassic sites in the Holy Cross Mountains.

In the later stages of her career she also published several papers on the history of palaeobotany in Kraków, particularly at the Jagiellonian University (e.g. Zdebska, 2007).

From 1975 until her retirement she worked as an adjunct in the Department of Palaeobotany, Institute of Botany, Jagiellonian University (later the Department of Palaeobotany and Palaeoherbarium). She served as Head of the Department from 1981 to 1988 and again from 2000 to 2011. After retiring in 2011 she worked part-time at the Institute of Botany for two more years, and then, almost until the last days of her life, she continued to contribute as a volunteer.

Throughout her entire professional career she taught at the university, especially courses in plant systematics and palaeobotany for biology and geology students. She prepared her lectures and classes with great care, often discussing the latest discoveries in world science during lectures. She placed particular emphasis on visual materials, illustrating her lectures with slides and frequently showing original fossil and living plant specimens. She designed unique classes for students, unparalleled at other Polish universities, based on original Devonian plant specimens, especially those she herself had described from Poland. Unfortunately, her teaching and administrative duties consumed much of her time and energy, often at the expense of her research.

In scientific work she was a perfectionist and expected the same from her students. As a teacher she was demanding but fair.

She was also strongly committed to popularization of science, especially palaeobotany. The culmination of these efforts was the preparation under her leadership of a large exhibition of fossil plants (called for some time the Palaeobotanical Museum and then the Palaeoherbarium), presenting plant evolution from the earliest colonization of land to modern times. Preparing such a large exhibition (over 20 display cases with several display shelves each) was a major scientific and logistical challenge and required the involvement of many colleagues, both scientific (e.g. S. Florjan) and technical, including even her own family. The exhibition, located in a building next to the Botanical Garden of the Jagiellonian University, was open from 2003 to 2019. It was used primarily for teaching purposes but was also open to the public during science-promotion events.

Throughout her scientific career she maintained close scientific and personal ties with many palaeontologists and palaeobotanists from Poland, Germany, France, Great Britan, Russia and the USA. She undertook foreign research internships at the University of London (1973, two months under the supervision of Prof. W. Chaloner) and at Claude-Bernard University in Lyon (1978, one month in collaboration with Prof. Y. Lemoigne). In 1988 she participated in the international research project "Contemporary and fossil flora of Russia and Poland" co-led by Prof. Natalia Snigirevskaya from the Komarov Institute of Botany, USSR Academy of Sciences, Leningrad (now Saint Petersburg). Special links connected her with the Department of Palaeobotany of the Institute of Botany of the Polish Academy of Sciences in Kraków, particularly with M. Reymanówna's students Dr. Jadwiga Ziaja and Dr. habil. Maria Barbacka. These contacts allowed her to acquire not only reprints of papers and books then unavailable in Poland but also new specimens of fossil plants, which served as comparative material for research and enriched the teaching base for palaeobotany classes.

She presented her research results at many national and international conferences, including Leningrad (USSR, 1975), Bonn (FRG, 1976), Bristol (Great Britain, 1978), Edmonton (Canada, 1984) and Berlin (Germany, 1992). She co-organized the 5th European Paleobotanical and Palynological Conference (Kraków, 1998) and the Kraków meeting within the International Geological Correlation Programme 469 Late Westphalian Terrestrial Biotas (2005).

She maintained active contacts with both amateur and professional fossil collectors. At the beginning of her career she developed a particularly close relationship with the amateur palaeobotanist and professional fossil collector Eufrozyn Sagan from the District Museum in Wałbrzych. Thanks to their cooperation she assembled a collection of Carboniferous plant specimens from Lower Silesia,

which were later used in paleobotany classes. The collaboration with E. Sagan and other collectors of Carboniferous fossils from the Lower Silesia was recognized by the Eufrozyn Sagan Medal awarded to her by the Polish Society of Friends of Earth Sciences in Wałbrzych in 2010, on the occasion of 50 years of the society's activity. In later years she also built a sincere friendship with the renowned fossil collector Zygmunt Holcer of Kraków. Thanks to her efforts he donated to the Institute of Botany the large collection of plant fossils he had gathered throughout his life.

She was a member of the Polish Botanical Society since 1972, serving as deputy secretary of the Kraków Branch (1972–1983) and secretary of the Palaeobotanical Section (1987–1990). From 1999 until the dissolution of the foundation she was a member of the Council of the W. Szafer Foundation for Polish Botany. Between 1995 and 2003 she served as editorial secretary of the journal *Acta Palaeobotanica*, and from 2004 to 2011 she was a member of its editorial board. She was very dedicated to maintaining the scientific and editorial quality of the journal, and I remember her spending many hours proofreading articles before they went to print.

For many years she struggled with Lyme disease, which diminished her creative powers. She was one of the first Lyme disease patients diagnosed in Poland and tried to spread knowledge about this disease and the threat posed by ticks among scientists and students working in the field. In recent years, further serious illnesses led to a marked deterioration in her health, ultimately resulting in her death.

Her interests were not limited to fossil plants; she was also deeply knowledgeable about modern floras, especially Polish species. She often collected comparative specimens of living plants to compare them with fossils. She loved sports, mountain hiking, and direct contact with nature. She was a licensed Tatra Mountains guide and a mountain tourism leader with the Polish Tourist and Sightseeing Society (PTTK). For her activities she received the silver PTTK badge.

For her contributions to the city of Kraków she was awarded the Honoris Gratia badge in 2013.

With the passing of Danuta Zdebska we have lost an outstanding scholar of immense knowledge, as well as a friend and teacher.

ACKNOWLEDGEMENTS

I am grateful to M. Barbacka, S. Florjan, A. Sojka, and J. Ziaja for sharing their recollections of Danuta Zdebska and for their valuable comments and discussions concerning this obituary. The text was line-edited by M. Jacobs.

REFERENCES

Birkenmajer, K., Ociepa, A.M., 2008. Plant-bearing Jurassic strata at Hope Bay, Antarctic Peninsula (West Antarctica): geology and fossil-plant description. Studia Geologica Polonica 128, 5–96.

Florjan, S., Zdebska, D., 2011. Nowe znalezisko skrzemionkowanego pędu benetyta z Polski. (summary: New specimen of the silicified bennettitalean trunk from Poland). Przegląd Geologiczny 59(7), 520–522.

Pacyna, G., Barbacka, M., 2022. Polish Palaeobotany: 750 million years of plant history as revealed in a century of studies. Palaeozoic macrofossils. Acta Societatis Botanicorum Poloniae 91, 1–20. https://www.doi.org/10.5586/asbp.9123

Pacyna, G., Zdebska, D., 2010. Upper Carboniferous seed fern (Pteridospermophyta) pollen organs from Silesia (Poland) and related evolution considerations. Monographiae Botanicae 100, 1–81.

Pacyna, G., Zdebska, D., 2012. Carboniferous plants preserved within sideritic nodules – a remarkable state of preservation providing a wealth of information. Acta Palaeobotanica 52(2), 247–269.

Pacyna, G., Barbacka, M., Zdebska, D., Ziaja, J., Fijałkowska-Mader, A., Bóka, K., Sulej, T., 2017. A new conifer from the Upper Triassic of southern Poland linking the advanced voltzialean type of ovuliferous scale with *Brachyphyllum-Pagiophyllum*-like leaves. Review of Palaeobotany and Palynology 245, 28–54. https://doi.org/10.1016/j.revpalbo.2017.05.015

Snigirevskaya, N.S., Popov, L.E., Zdebska, D., 1992. New findings of the oldest higher plants remains in the Middle Ordovician of the South Kazakhstan. Botanical Journal 77(4), 1–9. (in Russian with English summary)

Zdebska, D., 1972. *Sawdonia ornata* (= *Psilophyton princeps* var. *ornatum*) from Poland. Acta Palaeobotanica 13(2), 77–98.

Zdebska, D., 1978. On *Spongiophyton* from the Lower Devonian of Poland. Acta Palaeobotanica 19(1), 13–20.

Zdebska, D., 1982. A new zosterophyll from the Lower Devonian of Poland. Palaeontology 25(2), 247–263.

Zdebska, D., 1986. *Psilophyton szaferi* sp. nov. from the Lower Devonian of the Holy Cross Mountains, Poland. Acta Societatis Botanicorum Poloniae 55(3), 315–324.

Zdebska, D., 1986. Is *Spongiophyton* a Devonian liverwort. Folia Histochemica et Cytobiologica 24(4), 338–339.

Zdebska, D., 1993. Anatomical structure of *Psilophyton szaferi* Zdebska axes from the Lower Devonian of the Holy Cross Mountains in Poland and related phylogenetic considerations. Acta Palaeobotanica 33(1), 17–45.

Zdebska, D., 2007. Paleobotanika – główne kierunki badań (summary: Paleobotany – main areas of research). In: Zemanek, A., Zemanek, B. (eds), Naukowe szkoły botaniczne w Krakowie – tradycje i nowe zadania (Scientific botanical schools in Cracow – traditions and new tasks), Ogród Botaniczny – Instytut Botaniki UJ, pp. 197–212.

BIBLIOGRAPHY OF DANUTA ZDEBSKA

(in chronological order, compiled by Grzegorz Pacyna)

ORIGINAL PAPERS

Zdebska, D., 1972. *Sawdonia ornata* (= *Psilophyton princeps* var. *ornatum*) from Poland. Acta Palaeobotanica 13(2), 77–98.

Zdebska, D., 1978. On *Spongiophyton* from the Lower Devonian of Poland. Acta Palaeobotanica 19(1), 13–20.

Lemoigne, Y., **Zdebska, D.**, 1980. Structures problematiques observées dans des axes provenant du chert Dévonien de Rhynie (summary: Problematic structures observed in axes from the Devonian Rhynie Chert). Acta Palaeobotanica 21(1), 3–8.

Zdebska, D., 1982. A new zosterophyll from the Lower Devonian of Poland. Palaeontology 25(2), 247–263.

Zdebska, D., 1986. *Psilophyton szaferi* sp. nov. from the Lower Devonian of the Holy Cross Mountains, Poland. Acta Societatis Botanicorum Poloniae 55(3), 315–324.

Zdebska, D., 1986. Is *Spongiophyton* a Devonian liverwort. Folia Histochemica et Cytobiologica 24(4), 338–339.

Zdebska, D., 1989. Odwrotnie ustawione igły *Abies alba* Mill. Wybryk natury, czy…? (summary: Upside down positioned needles of *Abies alba* Mill. A freak of nature or…?). Sylwan 133(8), 35–39.

Snigirevskaya, N.S., Popov, L.E., **Zdebska, D.**, 1992. Novyye nakhodki ostatkov drevneyshikh vysshikh rasteniy v Srednem Ordovike Yuzhnogo Kazakhstana (summary: New findings of the oldest higher plants remains in the Middle Ordovician of the South Kazakhstan). Botanicheskii Zhurnal (Botanical Journal) 77(4), 1–9.

Zdebska, D., 1993. Anatomical structure of *Psilophyton szaferi* Zdebska axes from the Lower Devonian of the Holy Cross Mountains in Poland and related phylogenetic considerations. Acta Palaeobotanica 33(1), 17–45.

Pacyna, G., **Zdebska, D.**, 2010. Upper Carboniferous seed fern (Pteridospermophyta) pollen organs from Silesia (Poland) and related evolution considerations. Monographiae Botanicae 100, 1–81.

Florjan, S., **Zdebska, D.**, 2011. Nowe znalezisko skrzemionkowanego pędu benetyta z Polski. (summary: New specimen of the silicified bennettitalean trunk from Poland). Przegląd Geologiczny 59(7), 520–522.

Pacyna, G., **Zdebska, D.**, 2012. Carboniferous plants preserved within sideritic nodules – a remarkable state of preservation providing a wealth of information. Acta Palaeobotanica 52(2), 247–269.

Pacyna, G., Barbacka, M., **Zdebska, D.**, Ziaja, J., Fijałkowska-Mader, A., Bóka, K., Sulej, T., 2017. A new conifer from the Upper Triassic of southern Poland linking the advanced voltzialean type of ovuliferous scale with *Brachyphyllum-Pagiophyllum*-like leaves. Review of Palaeobotany and Palynology 245, 28–54.

REVIEWS, POPULAR AND OTHERS

Zdebska, D., 1974. Endemity pienińskie. Karpaty 1, 9–11. (in Polish)

Zdebska, D., 1979. Prace Hugona Zapałowicza w zakresie botaniki. Karpaty 13/14, 22–25. (in Polish)

Zdebska, D., 1993. Widłak jednakozarodnikowy z ligulą (A homosporous, ligulate lycopod). Wiadomości Botaniczne 37(1/2), 27–29. (in Polish)

Zdebska, D., 1998–2000. [all palaeobotanical entries]. In: Otałęga Z. (ed.), Biological

Encyclopedia (Encyklopedia Biologiczna). 13 vols. Opres, Kraków. (in Polish)

Zdebska, D., 2003. Makroflora (Macroflora). In: Pajchlowa, M., Malinowska, L., Miłaczewski, L., Sarnecka, E., Woroncowa-Marcinowska, T. (eds), Atlas skamieniałości przewodnich i charakterystycznych. Cz. 1b. Z. 1 Dewon (Atlas of indicator and characteristic fossils. Pt. 1b(1). Devonian). Państwowy Instytut Geologiczny, Ministerstwo Środowiska, p. 708. (in Polish)

Zdebska, D., 2007. Paleobotanika – główne kierunki badań (summary: Paleobotany – main areas of research). In: Zemanek, A., Zemanek, B. (eds), Naukowe szkoły botaniczne w Krakowie – tradycje i nowe zadania (Scientific botanical schools in Cracow – traditions and new tasks), Ogród Botaniczny – Instytut Botaniki UJ, pp. 197–212.

Zdebska, D., Zemanek, A., 2007. Paleobotanika. In: Zemanek, A., (ed.), The Golden Book of the Faculty of Biology and Earth Sciences, Part II: History of the Institutes, Jagiellonian University, Cracow, pp. 98–100. (in Polish)

Pacyna, G., **Zdebska, D.**, Barbacka, M., Ziaja, J., 2013. Co jadły polskie dinozaury? Wszechświat 114(7), 250–252. (in Polish)

Zdebska, D., 2013. 400 milionów lat historii roślin lądowych na Ziemi. Alma Mater 158, 108–111. (in Polish)

CONFERENCE ABSTRACTS

Zdebska, D., 1975. New genus of *Zosterophyllophytina* and its place in the evolutionary sequences. In: Abstracts of the papers presented at the XII International Botanical Congress, July 3–10, 1975, vol. I, Nauka Publisher, Leningrad, p. 103.

Zdebska, D., 1976. A new zosterophyll and its bearing on the problem of evolution of the lycopod sporophyll. In: Schaarschmidt, F. (ed.), First Meeting of European Palaeobotanists, 5–10.04.1976, Bonn and Wuppertal. Courier Forschungsinstitut Senckenberg 17, 92.

Iurina, A., Lemoigne, Y., **Zdebska, D.**, 1978. Données complémentaires sur la flore du Dévonien supérieur. In: International Symposium on the Devonian System 1978 (PADS 78), Abstracts of papers presented, The Palaeontological Association, University of Bristol, p. 33.

Zdebska, D., 1984. A small Lower Devonian plant with sporangia. In: Abstracts of Contributed Papers and Poster Session, Second International Organization of Paleobotany Conference, Edmonton, pages unnumbered.

Zdebska, D., 1992. Nowy gatunek z rodzaju *Psilophyton* z dolnego dewonu Gór Świętokrzyskich. In: Studencka, B., Skompski, S. (eds), Paleontologiczny zapis zdarzeń późnego dewonu i karbonu. XV Konferencja Paleontologów. Przegląd Geologiczny 40(10), 612. (in Polish)

Zdebska, D., 2001. Drzewiasta paproć *Asterochlaenopsis kirgisica* z Kazachstanu w zbiorach Muzeum Geologicznego Uniwersytetu Wrocławskiego (On *Asterochlaenopsis kirgisica*, tree-ferns from Kazakhstan in Geological Museum of Wrocław University). In: Materiały sesji i sympozjów 52 Zjazdu Polskiego Towarzystwa Botanicznego „Botanika w dobie biologii molekularnej", p. 204. (in Polish)

Zdebska, D., 2003. Paleobotanika – główne kierunki badań. In: Naukowe szkoły botaniczne w Krakowie – tradycje i nowe zadania, Sesja Jubileuszowa 90-lecia Instytutu Botaniki, 220-lecia Ogrodu Botanicznego UJ, 27–28.09.2003, Ogród Botaniczny – Instytut Botaniki UJ, Kraków, pp. 25–26. (in Polish)

Zdebska, D., 2007. Mezozoiczna paproć drzewiasta z płd.-zach. Polski. In: Sesja Naukowa Sekcji Paleobotanicznej Polskiego Towarzystwa Botanicznego, Abstrakty, Muzeum Ziemi Polskiej Akademii Nauk, Warszawa, 20 kwietnia 2007, page unnumbered. (in Polish)

Zdebska, D., 2008. Krakowska Szkoła paleobotaniki. Główne kierunki badań. In: Pierwszy Polski Kongres Geologiczny, Kraków 26–28 czerwca 2008, Abstrakty, Polskie Towarzystwo Geologiczne, Kraków, pp. 136–137. (in Polish)

Barbacka, M., Pacyna, G., Ziaja, J., **Zdebska, D.**, 2012. The new type of Late Triassic ovulate scales associated with *Brachyphyllum*-like leaves. In: Abstracts 13th International Palynological Congress, 9th International Organisation of Palaeobotany Conference,

August 23–30, 2012, Tokyo, Japan. Japanese Journal of Palynology, 58 special issue, Abstracts: IPC/IOPC 2012, p. 11.

Pacyna, G., **Zdebska, D.**, Barbacka, M., Ziaja, J., 2013. Ewolucja i sukcesja flor towarzyszących szczątkom kostnym i tropom dinozaurów w górnym triasie i dolnej jurze Południowej Polski. In: XXII Konferencja Naukowa Sekcji Paleontologicznej Polskiego Towarzystwa Geologicznego „Aktualizm i antyaktualizm w paleontologii", Tyniec, 27–30.09.2013, Materiały konferencyjne, Polskie Towarzystwo Geologiczne, Kraków, pp. 44–45. (in Polish)

Zdebska, D., Pacyna, G., 2013. Niezwykłe paprocie drzewiaste z kredy Polski. In: XXII Konferencja Naukowa Sekcji Paleontologicznej Polskiego Towarzystwa Geologicznego „Aktualizm i antyaktualizm w paleontologii", Tyniec, 27–30.09.2013, Materiały konferencyjne, Polskie Towarzystwo Geologiczne, Kraków, pp. 67–68. (in Polish)

Pacyna, G., Barbacka, M., **Zdebska, D.**, Ziaja, J., Sulej, T., 2015. Nowe wyniki badań paleobotanicznych górnego triasu Południowej Polski. In: „Śląskie dinozaury (nie tylko) z Krasiejowa", V Sesja Popularnonaukowa organizowana przez Instytut Nauk Geologicznych PAN i Studenckie Koło Naukowe Paleontologów Uniwersytetu Śląskiego Paradoxides. 9.12.2015 r., Instytut Nauk Geologicznych PAN, Ośrodek Badawczy w Krakowie, Kraków. Abstrakty, p. 15. (in Polish)

Pacyna, G., Barbacka, M., **Zdebska, D.**, Ziaja, J., Fijałkowska-Mader, A., Bóka, K., Sulej, T., 2016. New Late Triassic conifer connecting advanced Voltzialean type of ovuliferous scales with *Brachyphyllum*-like twigs from Patoka (Upper Silesia, Southern Poland). In: Szydło, A., Krobicki, M., Granoszewski, W. (eds), 17th Czech-Slovak-Polish Palaeontological Conference, Kraków, 20–21 October 2016, Polish Geological Institute – National Research Institute, Abstract Volume, p. 75.

Pacyna, G., **Zdebska, D.**, Barbacka, M., Jarzynka, A., 2018. New data on Lower Jurassic plants from the Holy Cross Mountains (Central Poland). In: 10th European Palaeobotany and Palynology Conference, Dublin, Ireland, 12–17 August 2018, Program & Abstracts, University College Dublin, p. 46.

Pacyna, G., **Zdebska, D.**, 2022. Zagadkowe ślady interakcji rośliny-zwierzęta na liściach iglastych z górnego triasu Poręby na Górnym Śląsku. In: Drzymulska, D., Górecki, A., Pidek, I.A. (eds), Sympozjum Sekcji Paleobotanicznej Polskiego Towarzystwa Botanicznego, Warszawa (on-line), 17.12.2022. Polskie Towarzystwo Botaniczne, Sekcja Paleobotaniczna PTB. Program i streszczenia wystąpień, p. 16. (in Polish)

CONFERENCE PROCEEDINGS AND MATERIALS

Zdebska, D., 1995. Stop 5.1. The Lower Devonian flora of Central and Southern Poland: morphology and anatomy of fossil plants (Lower Devonian – Emsian). In: Lipiarski, I., Vašiček, Z. (eds), Guide to Excursion A4, Paleontology of the Carboniferous and Permian of the Upper Silesian Coal Basin and the Lublin Coal Basin, August 25-August 27, 1995, XIII International Congress on Carboniferous-Permian (XIII ICC-P), August 28-September 2, 1995, Kraków, Poland, Polish Geological Institute, pp. 9–11.

Zdebska, D., 1998. A1. The Lower and Middle Devonian flora of Poland. In: Lipiarski, I. (eds), Guide to Excursion 1. Fossil plants from Carboniferous coal basins. The 5th European Palaeobotanical and Palynological Conference, June, 26–30.1998, Cracow, Poland, W. Szafer Institute of Botany, Polish Academy of Sciences, pp. 44–49.

Pacyna, G., **Zdebska, D.**, 2001. Górnokarbońskie makroszczątki roślinne w konkrecjach syderytowych z rejonu Sosnowca. Wstępna informacja (summary: Upper Carboniferous plant macrofossils from sideritic concretions of the Upper Silesian Coal Basin of Sosnowiec. Preliminary report). In: Lipiarski, I. (ed.), Proceedings, XXIV Symposium Geology of Coal-Bearing Strata of Poland, University of Mining and Metallurgy, Cracow, pp. 75–79.

Zdebska, D., 2001. Flora kajpru. In: Dzik, J. (ed.), Paleontologiczne opróbkowywanie profilów geologicznych. Kurs terenowy, 18–20.05.2001, Instytut Paleobiologii PAN, Nowa Ruda, pp. 21–23. (in Polish)

Zdebska, D., 2001. Problemy nomenklatoryczne na styku taksonomii organowej i biologicznej w paleobotanice. In: Dzik, J. (ed.), Nomenklatura taksonomiczna w paleontologii. Kurs, 24.11.2001, Instytut Paleobiologii PAN, Warszawa, pp. 6–7. (in Polish)

Zdebska, D., Snigirevskaya, N.S., 2001. Vymershiy paporotnik *Asterochlaenopsis kirgisica* (Stenzel) Sahni (class Zygopteridopsida) iz Tsentral'nogo Kazakhstana – v Geologicheskom Muzeye Vrotslava v Pol'she (summary: Extinct fern *Asterochlaenopsis kirgisica* (Stenzel) Sahni (class Zygopteridopsida) from the Central Kazakhstan – in Wrozlaw Geological Museum in Poland). In: Mezhdunarodnaya Nauchnaya Gorno-Geologicheskaya Konferentsiya, Rudnyy, Kazakhstan. Toporkovskiye chteniya, Vypusk 5, 246–250.

Pacyna, G., **Zdebska, D.**, 2002. Górnokarbońskie makroszczątki roślinne w konkrecjach syderytowych z rejonu Sosnowca (GZW) i Mazon Creek (stan Illinois w USA) (summary: Upper Carboniferous plant macrofossils from sideritic concretions in Sosnowiec (Upper Silesian Coal Basin) and Mazon Creek (Illinois, USA)). In: Lipiarski, I. (ed.), Proceedings, XXV Symposium Geology of Coal-Bearing Strata of Poland, University of Mining and Metallurgy, Cracow, pp. 123–127.

Zdebska, D., 2003. Muzeum ewolucji roślin kopalnych (summary: The Museum of evolution of fossil plants at the Institute of Botany, Jagiellonian University, Kraków). In: Lipiarski, I. (ed.), Proceedings, XXVI Symposium Geology of Coal-Bearing Strata of Poland, University of Mining and Metallurgy, Cracow, pp. 161–164.

Pacyna, G., **Zdebska, D.**, 2005. Nowa forma morfologiczna widłaka (Lepidodendrales) z dolnego westfalu okolic Sosnowca (Górnośląskie Zagłębie Węglowe) (summary: A new morphological form of a lycopod (Lepidodendrales) from the Lower Westphalian from Sosnowiec (Upper Silesian Coal Basin)). In: Lipiarski, I. (ed.), Proceedings, XXVIII Symposium Geology of Coal-Bearing Strata of Poland, University of Mining and Metallurgy, Cracow, pp. 91–95.

Zdebska, D., Pacyna, G., Jaworska, I., 2005. Nowe znaleziska dolnonamurskiej fauny (Invertebrata) z Dolnośląskiego Zagłębia Węglowego – wstępna informacja (summary: New findings of Lower Namurian fauna (Invertebrata) from Lower Silesian Coal Basin – preliminary report). In: Lipiarski, I. (ed.), Proceedings, XXVIII Symposium Geology of Coal-Bearing Strata of Poland, University of Mining and Metallurgy, Cracow, pp. 139–144.

Pacyna, G., **Zdebska, D.**, 2011. Galasy na liściu paproci z dolnej jury Gromadzic (Góry Świętokrzyskie) – przykład interakcji rośliny – zwierzęta. In: Matyja, B.A., Wierzbowski, A., Ziółkowski, P. (eds), JURASSICA IX, Materiały konferencyjne, Artykuły, Małogoszcz, 06–08.09.2011. Polskie Towarzystwo Geologiczne, Polska Grupa Robocza Systemu Jurajskiego, pp. 27–32. (in Polish)

Pacyna, G., **Zdebska, D.**, 2011. Nowe dane o rodzaju *Ixostrobus* Raciborski 1892 (nagozalążkowe, Czekanowskiales?) z dolnej jury Gromadzic (Góry Świętokrzyskie). In: Matyja, B.A., Wierzbowski, A., Ziółkowski, P. (eds), JURASSICA IX, Materiały konferencyjne, Artykuły, Małogoszcz, 06–08.09.2011. Polskie Towarzystwo Geologiczne, Polska Grupa Robocza Systemu Jurajskiego, pp. 33–39. (in Polish)

Pacyna, G., **Zdebska, D.**, Jarzynka, A., Barbacka, M., 2018. Arthropod damage marks on twigs of the conifer *Patokaea* from the Upper Triassic of Poland. In: Martin, T., Schellhorn, R., Schultz, J.A. (eds), 13th Symposium on Mesozoic Terrestrial Ecosystems and Biota Abstracts. Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany, July 21–23, 2018. Terra Nostra – Schriften der GeoUnion Alfred-Wegener-Stiftung, 2018/1, 92–93.