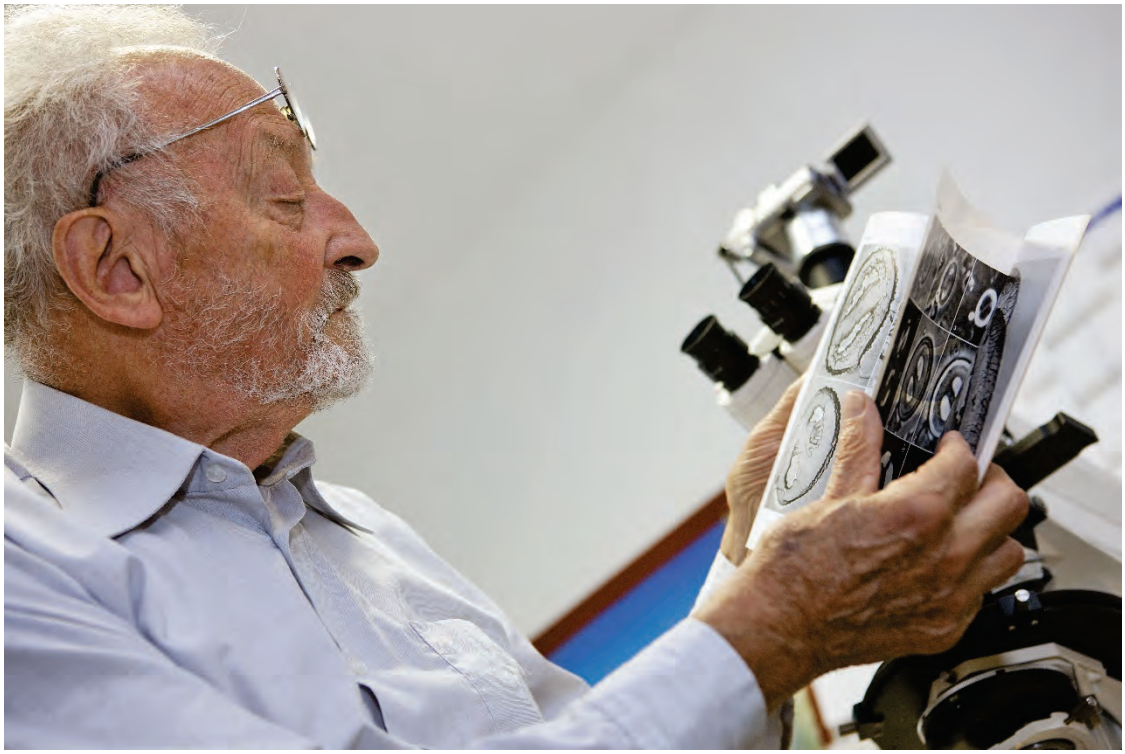
Tribute to DR. HERBERT STRADNER

in recognition of the bestowal of the

Eduard Suess-Medal

by the Austrian Geological Society, 2017

© GBA / Lammerhuber



To Herbert Stradner

*By **Hans Egger***
Department of Paleontology and Stratigraphy, Geological Survey of Austria, Vienna

In 1980 Herbert Stradner gave a course on calcareous nannoplankton at Salzburg University. Me and the other students were impressed, not only by Herbert´s knowledge but also by his generous and kind personality. After the last lesson, Herbert was busy to travel to the US to join the ship party of the "Glomar Challenger" for LEGXXV in the Southern Atlantic. He was busy, nevertheless, he did not forget to send a picture postcard from California to each of his Salzburg students.

Later, calcareous nannofossils became an important tool for my thesis in Cretaceous and Paleogene deep-water deposits and Herbert did not hesitate to give me a deeper insight into nannoplankton stratigraphy. He is one of the pioneers in that field since he published the first paper on the stratigraphic value of discoasterids in 1959 at the 5th World Petroleum Congress. At the time of this publication, Herbert still worked as a teacher for the English language at a secondary school in Vienna and he had to take care for his growing family. So he could follow his scientific passion only in his spare leisure time.

Despite his tight schedule in the late 1950´s, Herbert contacted a local oil company and tried to convince them of the stratigraphic value of nannofossils. Actually, he got the chance to demonstrate this value by working on drill cores from the Matzen oil field north of Vienna and he was able to decipher the top of the Oligocene there for the first time. This was the begin of a consultant career, which continued also after his employment at the Geological Survey of Austria, where he was a member of the staff between 1960 and 1990.

In the newly established nannoplankton laboratory Herbert biostratigraphically analysed thousands of samples for the field geologists and by this contributed essentially to the understanding of the evolution of the Eastern Alps. The publication of many modern geological maps of alpine sedimentary units would not have been possible without the biostratigraphic framework given by Herbert. Besides he found time for over one hundred descriptions of new species (archaeomonadins, diatoms, calcareous nannofossils and silicoflagellates), many of them important stratigraphical markers. A revision of his taxonomic work on nannofossils was presented on the occasion of his 85th birthday in 2010, when he was honoured by a special volume by the Geological Survey of Austria. A revision of his work on silicoflagellates followed a few years later. Herbert contributed to both publications as one of the authors and we are very happy and grateful that Herbert is still coming to our department and helps with his advice.

On behalf of the department of Paleontology and Stratigraphy it is a great honour and pleasure for me to convey my best congratulations to my friend and mentor Herbert Stradner for being awarded the Eduard Suess Medal.

Hans Egger

Dr. Herbert Stradner

*By **Jeremy R. Young***
Department of Earth Sciences, University College London, UK

On behalf of the International Nannoplankton Association I am delighted and honoured to convey my congratulations to Dr. Herbert Stradner on the occasion of his being awarded the Eduard Suess-Medal. Nannofossil palaeontology is now one of the most commonly used tools in modern biostratigraphy with experts across the globe. In the late nineteen-fifties, however, when Herbert Stradner began his micropaleontological studies the subject hardly existed. Nonetheless, he rapidly recognised the potential of silicoflagellates, coccolithophores, discoasters and other nannofossils to solve biostratigraphic problems, and he became one of the pioneers of the field. He was especially active in nannofossil studies during the decade from 1959 to 1969, publishing some 25 papers and describing over a hundred taxa in this period. He also applied them in practical biostratigraphy both in Austria and internationally and this applied aspect increasingly dominated his work including participation in DSDP Legs to the Mediterranean, Caribbean and South Atlantic. In recognition of this a total of eight species and three genera of nannofossils have been named after him, by colleagues from seven different countries.

Herbert was one of the founding members of the International Nannoplankton Association, and I am pleased to share a photograph of him from the meeting in Rijswijk, the Netherlands, where it was initiated. Later, he helped Katharina von Salis with hosting of the first INA conference in Vienna in 1985 and he both co-lead the fieldtrip – which ended with a particularly memorable evening in a Heuriger – and co-edited the Proceedings. During his career Herbert has mentored, encouraged and co-published with numerous nannofossil workers and is universally remembered with respect and affection.

With all best wishes, Jeremy Young, President of the International Nannoplankton Association.

Herbert Stradner at the foundation of the International Nannoplankton Association in 1977, and rather more in his element during our first conference in Vienna 1985 (Photographs: Ben Prins and Shirley van Heck).

List of nannotaxa named in honour of Dr. Herbert Stradner
Genera: *Stradneria* REINHARDT (1964), *Stradnerius* HAQ (1968), *Stradnerlithus* BLACK (1971).
Species: *Cyclococcolithus stradneri* JAFAR (1975), *Discoaster stradneri* MARTINI (1961), *Haslingfieldia stradneri* BLACK (1973), *Lithastrinus? stradneri* PERCH-NIELSEN (1973), *Microrhabdulus stradneri* BRAMLETTE & MARTINI (1964), *Micrantholithus stradneri* CHANG (1969), *Tegumentum stradneri* THIERSTEIN in ROTH & THIERSTEIN (1972), *Vekshinella stradneri* ROOD, HAY & BARNARD (1971).

Dr. Herbert Stradner

*By **William W. Hay***
University of Colorado, Boulder, USA

I first met Herbert Stradner in 1959, while I was on a year of postdoctoral work at the University of Basel, Switzerland, sponsored by the US National Science Foundation. Through a special arrangement with Chevron Oil Company I had additional funds that allowed me to travel to collect samples for study and to meet with colleagues all over western Europe.

In Basel I had followed up on the idea of the possible significance of calcareous nannofossils as stratigraphic indicators suggested by Milton Bramlette and William Riedel at Scripps Institution of Oceanography in California in 1954. I had examined samples of the shale layers of the Schlierenflysch that had been collected by Hans Schaub, and discovered that the calcareous nannofossils were indeed valuable stratigraphic markers.

Professor Louis Vonderschmitt made me aware of recent papers by a young Austrian micropaleontologist, Herbert Stradner, in the Erdoel-Zeitschrift concerning Paleocene discoasterids and their potential for stratigraphic zonation. I resolved to visit him, his mentor, Adolf Papp, and the famous specialist on modern calcareous nannoplankton, Erwin Kamptner, in Vienna. We met for the first time in the spring of 1960. Herbert told me of his just completed work with Paul Brönnimann on using discoasterids and planktonic foraminifera as stratigraphic markers in Cuba and showing how they could be used for global correlation. After the visit in Vienna, I went on to collect samples from the stratigraphic sections in western Austria that Herbert had studied, and later used them for comparative purposes.

It was Herbert Stradner who first realised the significance of discoasters and other calcareous nannoplankton fossils as stratigraphic markers levels with a refinement equal to or greater than the planktonic foraminifera that were the standard of the time. He expanded these studies from the Paleogene to the Neogene over the next few years and demonstrated their importance in global correlations. In many ways, Herbert Stradner was the father of the stratigraphic use of calcareous nannoplankton.

Later I became intensively involved with the Deep Sea Drilling project, and was able to recommend enthusiastically that Herbert be invited as an onboard specialist describing the calcareous nannoplankton and their stratigraphic significance.

Over the years, we were able to meet a number of times, and I always enjoyed discussing the progress of his investigations. His studies of calcareous nannoplankton and the fossil silicoflagellates that had been the topic of his doctoral dissertation continued throughout the rest of his distinguished career.

William W. Hay

A personal Tribute to *Herbert Stradner:* a consummate discoverer and an incomparable scholar of the "inner space"

*By **Bilal U. Haq**,*
Sorbonne Universités, Pierre et Marie Curie, Paris, France

Herbert Stradner in 1977

I met my friend and mentor Herbert Stradner in 1965 in Vienna when I was a mere lad and attending a yearlong post-graduate research program sponsored by UNESCO and the Geologische Bundesanstalt (Geological Survey of Austria). Here I also met many other eminent Austrian geoscientists of that time, including Rudolf Grill, Heinrich Kuepper, Kuno Bruno Kuntz, Rudolf Oberhauser and Manfred Schmid, among others, all of who were great teachers for a young budding geologist. Initially, I worked with Rudolf Oberhauser and a distinguished Vienna University professor, Adolf Papp, on Miocene planktonic foraminifera from the Vienna Basin. However, later in the program, Herbert Stradner introduced me to the wonders of the "inner space" through the electron-microscopic world of calcareous nannoplankton (marine microplankton with an evolutionary history going back to the Triassic). Herbert was already mentoring another student (who was to become my life-long friend from Japan, Toshiaki Takayama), but he readily took me under his wing as well. I was immediately smitten with these nanno-critters and decided to study them for my thesis at the University of Stockholm where I had been invited by a Swedish professor, Ivar Hessland, on a PhD fellowship.

On my first meeting with Herbert, we immediately developed a great rapport. He was an imposing and striking figure with well-chiseled Viennese countenance and a most kindly disposition. In the short two months before my departure, he patiently taught me whatever he could so that upon arrival in Stockholm I could get started on my thesis without delay. This was a tremendous help. He accepted the role of being my mentor with enthusiasm, even though I was not officially assigned to him as a student and he encouraged me to pursue my newfound passion for the "inner space". At Stockholm University, Ivar Hessland generously provided me with my own electron microscope and I went wild exploring the "inner space" and the nanno-world beyond the power of ordinary light microscopes. During the next four years, I regularly consulted with Herbert and eventually defended my doctorate thesis in Stockholm in 1972 with Herbert as one of my external examiners (see above).

Two views of Herbert Stradner with the author in 1972, at the conclusion of the author's doctoral dissertation. Left: Herbert congratulating the author at the conclusion of the thesis defense, and right: Herbert and Ivar Hessland flanking the author at dinner that night in a Stockholm Gamla Stan (old city) restaurant.

Since that time, I have occasionally visited with Herbert in Vienna and met him in other places while attending scientific conferences, and throughout this time, my memories of Herbert have been very pleasant ones. He is amongst the most soft-spoken and kindest people I have ever met. My most recent visit with him was during the EGU annual meeting in 2012, when he invited me to visit the Albertina Museum, followed by lunch at his favorite restaurant in the center of city, with a typical Viennese meal of asparagus soup, followed by beef goulash, and downed with Krügels of Gösserbräu.

Left: Herbert Stradner teaching the author how to make a proper Wiener Schnitzel at his Klosterneuburg *home in 1977. Right: Sharing a nice Viennese meal in Herbert's favourite restaurant in the centre of Vienna in 2012. Notice how during this time Herbert has remained youthful and handsome as ever.*

Herbert Stradner's active career as one of the world's most eminent calcareous nannoplankton researchers spans over five decades, publishing nearly 70 research papers, predominantly on nannofossils, but also including other micro-fauna and flora. Three decades of this interval (1960s through 1980s), was a period of great discovery in nannofossil taxonomy and biostratigraphy and Herbert has a lion's share of discovering new taxa (nearly a 100 at the last count) and documenting their biostratigraphic utility. His passion for the discovery of new forms (new genera, species and subspecies) is demonstrated by the fact that he described new taxa in most of his published works since he started publishing in 1958.

Herbert's doctoral thesis at Vienna University was on the Tertiary silicoflagellates of Austria (1956). Soon thereafter, several papers of discovery (1958–1961) followed this, many of them first reports on the occurrence of nannofossils in basins in Europe and elsewhere. Most of these early papers had a special focus on the nannofossils that are restricted to the Tertiary, the Discoasters. This culminated in a profusely illustrated tome on Discoasters of Austria, Rumania, Italy and Mexico and their biostratigraphic significance (1961), published together with Adolf Papp. This volume, with beautifully hand-drawn figures by Herbert, became the must-have reference for all Tertiary nannofossil researchers and remains important to this day.

After the Tertiary, Herbert diverted his attention to the Mesozoic (1962–1963) while still continuing to discover new taxa in the Tertiary. Several papers reported on the nannoflora of the regional Tertiary stratotypes and neostratotype sections in Europe, e.g., Tortonian, Helvetian, Wemmelian, Biarritzian, Messinian, Ergerian and Sarmatian (1963–1980).

Herbert also participated in a number of Deep Sea Drilling Program legs, either as a shipboard nannofossil expert, or as shore-based contributor, starting with the all-important Leg 13 in Mediterranean (1970) that was first to document the Messinian Salinity Crisis and the desiccation of the Mediterranean Sea in latest Miocene. His expertise contributed to accurate biochronology of the basins that were drilled (DSDP Leg 13, Mediterranean; Leg 29, South Pacific; Leg 42, Aegean Basin; Leg 66, Middle America Trench; and Leg 75, Angola Basin) with his studies of nannofossils, Archaeomonadaceae, diatoms and silicoflagellates (1973–1984). He also contributed to the resolving of the controversy across the Cretaceous-Tertiary boundary with nannofloral evidence from sections in Austria (1987–1988).

Herbert has continued to be active since his retirement in the late 1980s, writing papers on nannofossils and silicoflagellates together with many well-known Austrian and international researchers and contributing with his special knowledge of stratigraphy of the European basins. Herbert has remained engaged with the pursuit of his passion for science well into his late 1980s, his most recent contributions having been in cataloguing the type specimens of nannoplankton, silicoflagellates and archaeomonids in the collections of the Geological Survey of Austria (2010–2014).

Herbert Stradner's bibliography clearly illustrates his standing as the indefatigable scholar of the "inner space" who has not only contributed a large body of basic scientific knowledge to micropaleontology, but has also inspired many young researchers to take up the same pursuit and develop a passion for the unravelling the hidden mysteries of nature.

Bilal U. Haq

Reference list (1956–2015) of Herbert Stradner

STRADNER, H. (1956): Über fossile Silicoflagelliden aus dem Tertiär Österreichs. – Dissertation, Institut für Paläontologie der Universität Wien, 107 S., Wien.

STRADNER, H. (1958): Die fossilen Discoasteriden Österreichs, I. Teil. – Erdoel-Zeitschrift, **74**/6, 178–188, Wien.

STRADNER, H. (1959): First Report on the Discoasters of the Tertiary of Austria and their stratigraphic use. – Fifth World Petroleum Congress, Sect. I, Paper 60, 1081–1095, New York.

STRADNER, H. (1959): Die fossilen Discoasteriden Österreichs, II. Teil. – Erdoel-Zeitschrift, **74**/12, 472–488, Wien.

STRADNER, H. (1960): Über Nannoplankton-Invasionen im Sarmat des Wiener Beckens. – Erdoel-Zeitschrift, **75**/12, 430–432, Wien.

BRÖNNIGMANN, P. & STRADNER, H. (1960): Die Foraminiferen und Discoasteridenzonen von Kuba und ihre interkontinentale Korrelation. – Erdoel-Zeitschrift, **76**/10, 364–369, Wien.

MARTINI, E. & STRADNER, H. (1960): *Nannotetraster*, eine stratigraphisch bedeutsame neue Discoasteridengattung. – Erdoel-Zeitschrift, **76**/8, 266–270, Wien.

STRADNER, H. (1961): Vorkommen von Nannofossilien im Mesozoikum und Alttertiär. – Erdoel-Zeitschrift, 77/3, 77–88, Wien.

STRADNER, H. (1961): Über fossile Silicoflagelliden und die Möglichkeit ihrer Verwendung in der Erdölstratigraphie. – Erdöl und Kohle, **14**/2, 87–92, Hamburg.

STRADNER, H. & PAPP, A. (1961): Tertiäre Discoasteriden aus Österreich und deren stratigraphische Bedeutung mit Hinweisen auf Mexiko, Rumänien und Italien. – Jahrbuch der Geologischen Bundesanstalt, SB **7**, 160 pp., Wien.

STRADNER, H. (1962): Über neue und wenig bekannte Nannofossilien aus Kreide und Alttertiär. – Verhandlungen der Geologischen Bundesanstalt, **1962**/2, 363–377, Wien.

STRADNER, H. (1962): Bericht 1961 über die Aufsammlungen von mesozoischen und alttertiären Nannoplanktonmaterialien aus der Waschbergzone (Niederösterreich). – Verhandlungen der Geologischen Bundesanstalt, **1962**/3, A106–A107, Wien.

STRADNER, H. (1962): Über das fossile Nannoplankton des Eozän-Flysch von Istrien. – Verhandlungen der Geologischen Bundesanstalt, **1962**, 176–186, Wien.

STRADNER, H. (1963): New contributions to Mesozoic stratigraphy by means of nannofossils. – 6th World Petroleum Congress, Sect.1, Paper 4, 167–183, Frankfurt/Main.

STRADNER, H. (1963): Bericht 1962 über das Nannoplankton des Torton in Niederösterreich und Kärnten. – Verhandlungen der Geologischen Bundesanstalt, **1963**/3, A74–A76, Wien.

GOHRBANDT, K. mit Beiträgen von PAPP, A. & STRADNER, H. (1963): Zur Gliederung des Paläogen im Helvetikum nördlich Salzburg nach planktonischen Foraminiferen. – Mitteilungen der Geologischen Gesellschaft in Wien, **56**/1, 1–116, Wien.

BACHMANN, A., PAPP, A. & STRADNER, H. (1963): Mikropaläontologische Studien im „Badener Tegel" von Frättingsdorf N.Ö. – Mitteilungen der Geologischen Gesellschaft in Wien, **56**, 117–210, Wien.

STRADNER, H. (1964): Die Ergebnisse der Aufschlußarbeiten der ÖMV AG in der Molassezone Niederösterreichs in den Jahren 1957—1963. Teil III. Ergebnisse der Nannofossil-Untersuchungen. – Erdoel-Zeitschrift, **80**/4, 133–139, Wien.

STRADNER, H. (1965): Nannofossiluntersuchungen an den Bohrkernen der Tiefbohrung Donar 5 (südliches Münsterland, Mbl. Drensteinfurt 4241). – Erdöl und Kohle, **19**/9, 737–738, Hamburg.

STRADNER, H. & ADAMIKER, D. (1966): Nannofossilien aus Bohrkernen und ihre elektronenmikroskopische Bearbeitung. – Erdoel-Zeitschrift, **82**, 330–341, Wien.

FUCHS, W. & STRADNER, H. (1967): Die Foraminiferenfauna und Nannoflora eines Bohrkernes aus dem höheren Mittel-Alb der Tiefbohrung Delft 2 (NAM), Niederlande. – Jahrbuch der Geologischen Bundesanstalt, **110**/2, 245–341, Wien.

STRADNER, H. & EDWARDS, A. (1968): Electron Microscopic studies on upper eocene coccoliths from the Oamaru diatomite, New Zealand. – Jahrbuch der Geologischen Bundesanstalt, SB **13**, 66 S., Wien.

STRADNER, H., ADAMIKER, D. & MARESCH, O. (1968): Electron Microscope Studies on Albian Calcareous Nannoplankton from the Delft 2 and Leidschendam 1 Deepwells, Holland. – Verhandelingen der koninklijke Nederlandse Akademie van Wetenschappen, Eerste Reeks, Deel **XXIV**, No. 4, 107 pp., Amsterdam.

STRADNER, H. (1969): The Nannofossils of the Eocene Flysch in the Hagenbach Valley (Northern Vienna Woods), Austria [Nannofossilien vom Eozän-Flysch im Hagenbach Tal (Wienerwald) Österreich]. – Rocznik Polskiego Towarzystwa Geologicznego [Annales de la Sociéte géologique de Pologne], **39**, 403–432, Kraków.

ACHUTHAN, M.V. & STRADNER, H. (1969): Calcareous nannoplankton from the Wemmelian stratotype. – In: BRÖNNIGMANN, P. & RENZ, H.H. (Eds.): Proceedings of the First International Conference on Planktonic Microfossils, Geneva 1967, **1**, 1–13, Leiden.

BILGÜTAY, U., JAFAR, S.A., STRADNER, H. & SZÖTS, E. (1969): Calcareous Nannoplankton from the Eocene of Biarritz, France. – In: BRÖNNIGMANN, P. & RENZ, H.H. (Eds): Proceedings of the First International Conference on Planktonic Microfossils, Geneva 1967, **1**, 167–178, Leiden.

RYAN, W.B.F., HSÜ, K.J., NESTEROFF, W.D., PAUTOT, G., WEZEL, F.C., LORT, J., CITA, M.B., MAYNC, W., STRADNER, H. & DUMITRICA, P. (1970): Deep Sea Drilling Project: Leg 13. – Geotimes, **15**/10, 12–15, Washington, D.C.

STRADNER, H. (1971): On the ultrastructure of Miocene Archaeomonadaceae (Phytoflagellates) from Limberg, Lower Austria. – In: FARINACCI, A. (Ed.): Proceedings of the II Planktonic Conference Roma 1970, Rome, Edizioni Tecnoscienza, **2**, 1183–1198, Roma.

SHAFIK, S. & STRADNER, H. (1971): Nannofossils from the Eastern Desert, Egypt with reference to Maastrichtian nannofossils from the USSR. – Jahrbuch der Geologischen Bundesanstalt, SB **17**, 69–104, Wien.

NESTEROFF, W.D., RYAN, W.B.F., HSÜ, K., PAUTOT, G., WEZEL, F.G., LORT, J.M., CITA, M.B., MAYNC, W., STRADNER, H. & DUMITRICA, P. (1972): Evolution de la sédimentation pendant le Néogène en Méditerranée d'après les Forages JOIDES-DSDP [Neogene sedimentation in the Mediterranean Sea based upon information from JOIDES-DSDP]. – Pubblicazione, Milan Universita, Istituto di Geologia e Paleontologia, **125**, 47–62, Milano. Open Access version: http://archimer.ifremer.fr/doc/00000/5434/

STRADNER, H. (1973): Nannofossils in Gorringe Bank-Site 120. – In: RYAN, W.B.F., HSÜ, K.J., CITA, M.B., DUMITRICA, P., LORT, J., MAYNC, W., NESTEROFF, W.D., PAUTOT, G., STRADNER, H. & WEZEL, F.C. (Eds.): Initial Reports of the Deep Sea Drilling Project, **13**/1, 25–27, 1187–1190, Washington, D.C.

STRADNER, H. (1973): Catalogue of calcareous Nannoplankton from Sediments of Neogene age in the eastern North Atlantic and Mediterranean Sea. – Initial Reports of the Deep Sea Drilling Project, **13**, 1137–1199, Washington, D.C.

STRADNER, H. & GRÜN, W. (1973): On *Nannoconus abundans* nov. spec. and on laminated calcite growth in Lower Cretaceous nannofossils. – Verhandlungen der Geologischen Bundesanstalt, **1973**, 267–283, Wien.

FORCHHEIMER, S. & STRADNER, H. (1973): *Scampanella*, eine neue Gattung kretazischer Nannofossilien. – Verhandlungen der Geologischen Bundesanstalt, **1973**/2, 285–289, Wien.

CITA, M.B., STRADNER, H. & CIARANFI, N. (1973): Biostratigraphical investigations on the Messinian stratotype and on overlying "Trubi" Formation. – Rivista Italiana di Paleontologia e Stratigrafia, **79**, 393–446, Milano.

RYAN, W.B.F., HSÜ, K.J., CITA, M.B., DUMITRICA, P., LORT, J., MAYNC, W., NESTEROFF, W.D., PAUTOT, G., STRADNER, H. & WEZEL, F.C. (1973): Western Alboran Basin Site 121. – In: RYAN, W.B.F., HSÜ, K.J., CITA, M.B., DUMITRICA, P., LORT, J., MAYNC, W., NESTEROFF, W.D., PAUTOT, G., STRADNER, H. & WEZEL, F.C. (Eds.): Leg 13. – Initial Reports of the Deep Sea Drilling Project, **13**, Part II – Supplementary Investigations, 43–89, Washington, D.C.

STRADNER, H. (1975): Ultrastructure of Upper Cretaceous siliceous microfossils from the Campbell Plateau, Site 275. – In: HAJÓS, M. (1975, with additional contribution from HERBERT STRADNER): Late Cretaceous Archaeomonadaceae, Diatomaceae, and Silicoflagellatae from the South Pacific Ocean, Deep Sea Drilling Project, Leg 29, Site 275. – Initial Reports of the Deep Sea Drilling Project, **29**, 913–1009.

VISMARA-SCHILLING, A., STRADNER, H., CITA, M.B. & GAETANI, M. (1976): Stratigraphic investigations on the late Neogene of Corfou (Greece) with special reference to the Miocene/Pliocene boundary and to its geodynamic significance. – Memorie della Societá Geologica Italiana, **16**, 279–317, Roma.

STRADNER, H. & PRIEWALDER, H. (1977): Über das Nannoplankton der Klementer Schichten (Coniac). – In: KOLLMANN, H.A., BACHMAYER, F., NIEDERMAYR, G., SCHMID, M.E., KENNEDY, W.J., STRADNER, H., PRIEWALDER, H., FUCHS, G., WESSELY, G.: Beiträge zur Stratigraphie und Sedimentation der Oberkreide des Festlandsockels im nördlichen Niederösterreich. – Jahrbuch der Geologischen Bundesanstalt, **120**/2, 419–426, Wien.

FUCHS, R. & STRADNER, H. (1977): Über Nannofossilien im Badenien (Mittelmiozän der Zentralen Paratethys). – Beiträge zur Paläontologie von Österreich, **2**, 281–301, Wien.

SCHILLING, A.V. & STRADNER, H. (1977): I 'Trubi' di Buonfornello (Sicilia). Biostratigrafia e tentativo di valutazione paleoclimatica. – Rivista Italiana di Paleontologia e Stratigrafia, **83**, 869–896, Milano.

STRADNER, H. (1978): Bericht über Nannofossilien aus dem Paleozän von Michelstetten (Waschbergzone), NÖ. – Verhandlungen der Geologischen Bundesanstalt, **1978**/2, 143–146, Wien.

STRADNER, H. & BACHMANN, A. (1978): Late Pliocene and Early Pleistocene silicoflagellates and ebridians from DSDP Site 378 in the Aegean Basin, north of Crete. – Initial Reports of the Deep Sea Drilling Project, **42**/1, 805–815, Washington, D.C.

STRADNER, H. & FUCHS, R. (1978): Das Nannoplankton in Österreich. – In: PAPP, A., CICHA, I., SENES, J. & STEININGER, F. (Eds.): Chronostratographie und Neostratotypen, Miozän M 4, Band Badenien, 489–498, Wien.

MOORE, J.C., WATKINS, J.S., SHIPLEY, T.S., BACHMAN, S.B., BEGHTEL, F.W., BUTT, A., DIDYK, B.M., LEGGETT, J.K., LUNDBERG, N., MCMILLEN, K.J., NIITSUMA, N., SHEPHARD, L.E., STEPHAN, J.-F. & STRADNER, H. (1979): Progressive accretion in the Middle America Trench, Southern Mexico. – Nature, **281**, 638–642, London.

FUCHS, R., GRÜN, W., PAPP, A., SCHREIBER, O. & STRADNER, H. (1980): Vorkommen von Ergerien in Niederösterreich. – Verhandlungen der Geologischen Bundesanstalt, 1979/3, 295–311, Wien.

STRADNER, H. & FUCHS, R. (1980): Über Nannoplanktonvorkommen im Sarmatien (Ober-Miozän) der Zentralen Paratethys in Niederösterreich und im Burgenland. – Beiträge zur Paläontologie v. Österreich, **7**, 251–279, Wien.

STRADNER, H. & SEIFERT, P. (1980): *Transversopontis pax* n. sp., ein neues Nannofossil aus dem basalen Oligozän des nördlichen Niederösterreich. – Beiträge zur Paläontologie von Österreich, **7**, 281–291, Wien.

STRADNER, H. & ALLRAM, F. (1981): The Nannofossil assemblages of Deep Sea Drilling Project Leg 66, Middle America Trench. – Initial Reports of the Deep Sea Drilling Project, **66**, 589–639, Washington, D.C.

STRADNER, H. & ALLRAM, F. (1981): Notes on an enigmatic siliceous cyst, Middle America Trench, Deep Sea Drilling Project Hole 490. – Initial Reports of the Deep Sea Drilling Project, **66**, 641–642, Washington, D.C.

WATKINS, J.S., MOORE, J.C., SHIPLEY, T.H., BACHMAN, S.B., BEGHTEL, F.W., BUTT, A., DIDYK, B.M., LEGGETT, J.K., LUNDBERG, N., MCMILLEN, K.J., NIITSUMA, N., SHEPHERD, L.E., STEPHAN, J.F. & STRADNER, H. (1981): Accretion, Underplating, Subduction and Tectonic Evolution, Middle America Trench, Southern Mexico: Results from DSDP Leg 66. – Oceanologica Acta, **1981**, Special Issue, 213–224, Paris.

HAY, W.W., SIBUET, J.-C., BARRON, ERIC, J., BOYCE, BRASSELL, S., DEAN, W.E., HUC, A.Y., KEATING, B.H., MCNULTY, C.L., MEYERS, P.A., NOHARA, M., SCHALLREUTER, R.E., STEINMETZ, J.C., STOW, D. & STRADNER, H. (1982): Sedimentation and Accumulation of organic carbon in the Angola Basin and on Walvis Ridge. Preliminary results of Deep Sea Drilling Project Leg 75. – Geological Society of America Bulletin, **93**/10, 1038–1050, Boulder.

MOORE, J.C., WATKINS, J.S., MCMILLEN, K.J., BACHMAN, S.B., LEGGETT, J.K., LUNDBERG, N., SHIPLEY, T.H., STEPHAN, J.-F., BEGHTEL, F.W., BUTT, A., DIDYK, B.M., NIITSUMA, N., SHEPHARD, L.E. & STRADNER, H. (1982): Facies belts of the Middle America Trench and forearc region, southern Mexico: results from Leg 66 DSDP. – Geological Society of London, Special Publications, **10**, 77–94, Wien.

STEINMETZ, J. & STRADNER, H. (1984): Cenozoic Calcareous Nannofossils from Deep Sea Drilling Project Leg 75, Southeast Atlantic Ocean. – Initial Reports of the Deep Sea Drilling Project, **75**, 671–753, Washington, D.C.

STEINMETZ, J.C., BARRON, E., BOERSMA, A., KEATING, B., MCNULTY, C., SANCETTA, C. & STRADNER, H. (1984): Summary of biostratigraphy and magnetostratigraphy of Deep Sea Drilling Project Leg 75. – Initial Reports of the Deep Sea Drilling Project, **75**, 449–458, Washington, D.C.

STRADNER, H. & STEINMETZ, J., with a contribution by SVABENICKA, L. (1984): Cretaceous Calcareous Nannofossils from the Angola Basin, Deep Sea Drilling Project Site 530. – In: HAY, W.W. & SIBUET, J.-C. (Eds): Initial Reports of the Deep Sea Drilling Project, **75**, 565–649, Washington, D.C.

PREISINGER, A., ZOBETZ, E., GRATZ, A.J., LAHODYNSKY, R., BECKE, M., MAURITSCH, H.J., EDER, G., GRSSS, F., RÖGL, F., STRADNER, H. & SURENIAN, R. (1986): The Cretaceous/Tertiary boundary in the Gosau Basin, Austria. – Nature, **322**, 794–799, London.

STRADNER, H. (1987): A monospecific thanatocoenosis deposited after a Late Oligocene nannoplankton bloom. – Abhandlungen der Geologischen Bundesanstalt, **39**, 314–315, Wien.

POSCH, F. & STRADNER, H. (1987): Report on Triassic Nannoliths from Austria. – Abhandlungen der Geologischen Bundesanstalt, **39**, 231–237, Wien.

PLÖCHINGER, B. mit Beiträgen von DRAXLER, I., OBERHAUSER, R., SCHÜSSLER, L., STRADNER, H. & SUMMESBERGER, H. (1987): Zur Klärung der geologischen Situation am Südende der Weyerer Bögen (Steiermark). – Jahrbuch der Geologischen Bundesanstalt, **130**, 93–108, Wien.

STRADNER, H. & RÖGL, F. (1988): Microfauna and nannoflora of the Knappengraben (Austria) across the Cretaceous/Tertiary boundary. – Berichte der Geologischen Bundesanstalt, **15**, 25–26, Wien.

LOBITZER, H., KODINA, L.A., SOLTI, G., SCHWAIGHOFER, B., SURENIAN, R. unter Mitarbeit von DOBRUSKINA, I.A., DOSZTALY, L., DRAXLER, I., HERRMANN, P., STOJASPAL, F. & STRADNER, H. (1988): Fazies, Geochemie und Stratigraphie ausgewählter Vorkommen österreichischer organisch reicher Gesteine – Ein Zwischenbericht. – Geologisch-Paläontologische Mitteilungen Innsbruck, **15**, 85–107, Innsbruck.

LOBITZER, H., BODROGI, E., FILÁCZ, E., STRADNER, H. & SURENIAN, R. (1994): Lebensspuren der Oberalmer, Schrambach- und Roßfeld-Formation (Oberjura/Unterkreide) der Salzburger Kalkalpen. – In: LOBITZER, H., CSÁSZÁR, G. & DAURER, A. (Eds): Jubiläumsschrift, 20 Jahre Geologische Zusammenarbeit Österreich-Ungarn, 285–322, Wien.

PREISINGER, A., ASLANIAN, S., BRANDSTÄTTER, F., GRASS, F., STRADNER, H. & SUMMESBERGER, H. (2002): Cretaceous-Tertiary profile, rhythmic deposition, and geomagnetic polarity reversals of marine sediments near Bjala, Bulgaria. – In: KOEBERL, C. & MACLEOD, K.G. (Eds.): Catastrophic Events and Mass Extinctions: Impacts and Beyond. – Geological Society of America Special Paper, **356**, 213–229, Boulder.

STRADNER, H. (2002): Silicoflagellaten-Vorkommen im Karpatium (Untermiozän) des Korneuburger Beckens (Niederösterreich). – Beiträge zur Paläontologie, **27**, 9–15, Wien.

EGGER, H., RÖGL, F. & STRADNER, H. (2007): Kalkiges Nannoplankton und Foraminiferen aus der *Chiasmolithus gigas*-Subzone (Mitteleozän) von Niederhollabrunn (Waschbergzone, Niederösterreich). – Jahrbuch der Geologischen Bundesanstalt, **147**, 379–386, Wien.

EGGER, H., KOEBERL, C., WAGREICH, W. & STRADNER, H. (2009): The Cretaceous-Paleogene (K/Pg) boundary at Gams, Austria: Nannoplankton stratigraphy and geochemistry of a bathyal northwestern Tethyan setting. – Stratigraphy, **6**, 333–347, New York.

STRADNER, H., AUBRY, M.-P. & BONNEMAISON, M. (2010): Calcareous Nannofossil Type Specimens in the Collection of the Geological Survey of Austria: A Taxonomic and Stratigraphic Update. – Jahrbuch der Geologischen Bundesanstalt, **150**/1+2, 9–84, Wien.

SAMES, B. & STRADNER, H. (2014): Type Specimens of Silicoflagellata and Archaeomonadaceae in the Collection of the Geological Survey of Austria: An inventory. – Jahrbuch der Geologischen Bundesanstalt, **154**/1–4, 135–154, Wien.