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OBITUARY

The life and scientific work of Ebrahim Ghasemi-Nejad (1960–2020)

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1. Introduction

Iran has experienced significant delays in generating and developing research in paleopalynology compared to many other countries. Palynology studies in Iran predominantly centered on spores and pollen grains from Jurassic deposits (Kimyai 1974, 1975, 1977). The limited exploration into dinoflagellate cyst studies in Iran was documented by Wheeler and Sarjeant (1990). Indeed, paleopalynology in Iran, particularly Mesozoic palynology, owes much of its success to one scholar: Ebrahim Ghasemi-Nejad (Figure 1). Professor Ghasemi-Nejad pioneered this field, conducting extensive research and attaining noteworthy academic achievements.

Mesozoic deposits in Iran underwent extensive investigation from various perspectives. (e.g. Assereto 1966; Assereto et al. 1968; Seyed-Emami 1971; Ruttner 1984). Ghasemi-Nejad extensively researched Mesozoic palynology in Iran and helped to establish a comprehensive understanding of palynomorphs, especially dinoflagellate cysts. Throughout his career, he made groundbreaking discoveries and advances that have shaped our understanding of the Mesozoic in Iran.

Despite facing numerous challenges and obstacles, he was dedicated to his scientific work and pursued his passion with relentless determination. Today, his contributions to palynology are widely recognized and celebrated. Through his dedication, expertise, and pioneering research, he transformed paleopalynology at the University of Tehran where a center of research was established. Ghasemi-Nejad's contributions to paleopalynology in Iran are many and far-reaching.

He also trained and mentored numerous students. Today, his students work in academia, in oil companies, and at the Geological Survey and Mineral Exploration of Iran as palynologists. Besides his scientific contributions, Ghasemi-Nejad was known for his generosity, kindness, and dedication to his students and colleagues. His legacy continues to inspire and influence researchers in Iran and beyond even after his demise. His belief in teamwork and his unique ability in team management were among his many admirable qualities. He continued to impart his knowledge of Mesozoic palynology across various parts of Iran. His extraordinary ability to interact with others, humanitarian character, and high morals made him a respected figure in the Iranian paleontology community soon after his return to Iran. This obituary aims to look back at his life and scientific career.

2. Birth, childhood, education, and marriage

Ebrahim Ghasemi-Nejad Raeini (Ebrahim Ghasemi-Nejad) was born on March 21, 1960, in the village of Balvard in Kerman, Iran. He was the first child in the family. His small village had no school available when he was young, so when he was seven, his father decided to move from Balvard to Sirjan, allowing him to go to school. He lived with his family in Sirjan until he finished high school. Ebrahim was a curious student and deeply interested in the natural world. His passion for understanding the mysteries of nature led him to pursue rigorous training in geology.

Ghasemi-Nejad's educational journey began with his bachelor's degree in geology in 1985 from Ferdowsi University in Mashhad, Iran. His decision to pursue a master's degree in paleontology was a natural extension of his fascination with the history of life on Earth. He successfully completed his master's degree in paleontology at Kharazmi University (formerly known as Tarbiat Moalem University) in 1989. Although his thesis focused on foraminifera, his passion for paleopalynology led him to pursue further education in the field. Before starting his PhD studies, he volunteered as a geologist for nearly a year in underprivileged areas in Kerman, his home province in which he contributed to rural development projects.

Traditionally, Iran's Ministry of Science has created opportunities for the country's talented students to study abroad in several fields that lacked experts in Iran. After Ghasemi-Nejad completed his master's degree, he received a governmental scholarship to pursue a PhD in palynology at the University of Saskatchewan in Canada. He had the honor of being one of the students of Professor William Antony Swithin Sarjeant (1935–2002), also known as Bill Sarjeant. In 1995, Ebrahim Ghasemi-Nejad successfully defended his PhD thesis at the University of Saskatchewan. He then started as a postdoctoral researcher at the University of Zurich with Reinhart A. Gygi (1935–2014). He worked in Gygi's lab for nearly three years. In 1999, with Sarjeant and Gygi, he published his first work on palynology (Ghasemi-Nejad et al. 1999).

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Figure 1. Professor Ebrahim Ghasemi-Nejad giving a speech at the 20th Iranian Geological Symposium, University of Tehran, Iran. Source: Professor Ghasemi-Nejad's family.

Shortly after completing his PhD in 1995, he married Sholeh Mansouri, an Iranian doctor, and they had a son together, named Amirhossein. With tears glistening in her eyes, Dr. Mansouri expressed her feelings about their marriage in an interview: "Ibrahim was like an angel in the guise of a human being, and destiny brought him to my side."

3. Career and his influence in academia

In Iran, among the universities that invited him to assume a lecturer position at the assistant professor level, he finally chose to teach at the University of Tehran, the country's leading educational institution. This proved to be a wise choice for Ghasemi-Nejad, giving him a platform from which to introduce the science of Mesozoic palynology to the country. Furthermore, Ghasemi-Nejad agreed to collaborate with the Department of Geology at Ferdowsi University of Mashhad, where he completed his undergraduate studies. In addition to teaching, he also assumed responsibility for supervising students at both campuses. He also maintained close academic ties with the Research Institute for Earth Sciences (RIES) of the Geological Survey and Mineral Exploration of Iran.

Known for his keen sense of responsibility and reliability, Ghasemi-Nejad enjoyed the trust of his colleagues and superiors. In recognition of his outstanding contributions, in 2015 he was awarded the prestigious title of Exemplary National Geologist. He headed the Department of Geology at the University of Tehran for nearly half a decade. For eight years, he was a member of the Basic Sciences Publications Committee of the Iranian Ministry of Science, Research and Technology.

Ghasemi-Nejad served on the editorial boards of various Iranian journals. Particularly notable was his key role in transforming the *Journal of Science* at University of Tehran, leading the journal to become a specialized international publication focusing on geology—a gap that his efforts filled. Thus, *Geopersia Journal* was born and began publishing articles. He was editor in chief of *Geopersia* until his passing.

Professor Ebrahim Ghasemi-Nejad played a central role in advancing geology at the University of Tehran. His commitment to education and research is evident in his contributions to establishing and improving various laboratories in the Department of Earth Sciences. Notably, he equipped the department with a palynology laboratory despite the challenge of limited research funding. The Support Foundation of the University of Tehran (SFUT) acknowledges his significant role in rebuilding and equipping the palynology laboratory through generous financial donations, which were made using his own money. He also extended his support by donating equipment to the paleontology laboratory, thereby enriching the resources available to students and researchers. Professor Ghasemi-Nejad's commitment extended beyond material contributions. He recognized the significance of fieldwork and generously donated two cars to the university's Department of Geology, using his personal funds, which proved invaluable for field research.

Additionally, his pioneering work in establishing the palynology laboratory also contributed to raising the status of palynology as a research field in Iran. By creating a dedicated research space and the training of future scientists in the field, he helped to raise local awareness of palynology's importance in understanding the geologic past.

As a teacher, Professor Ebrahim Ghasemi-Nejad was passionate about sharing his knowledge of and enthusiasm for geology with his students. He taught a variety of courses, including stratigraphy, biostratigraphy, paleoecology, and marine palynology, to both undergraduate and graduate students. Professor Ghasemi-Nejad was always enthusiastic about implementing innovative teaching methods and continuously sought self-improvement. His exceptional teaching methods earned him recognition as an exemplary professor at the University of Tehran. His engagement with students, which he found very satisfying, demonstrated his dedication to sharing knowledge and inspiring the next generation of geologists.

4. Research interests and scientific work

The first palynology studies of Iranian Mesozoic sedimentary rock units began under Professor Ghasemi-Nejad's leadership. This required extensive fieldwork, including collecting rock samples from different locations around the country. The samples were analyzed at the University of Tehran laboratory. Beyond academia, he had a strong collaboration on palynology studies with the National Iranian Oil Company.

Ghasemi-Nejad's decision to focus on specific disciplines in his academic career can be considered significant and groundbreaking, as in many academic contexts in Iran, scholars often pursue a broad range of topics. As his research progressed, he realized the importance of working more closely with experts in other fossil groups. By collaborating with these experts, he gained a comprehensive understanding of Iran's geological history during the Mesozoic (Ghasemi-Nejad et al. 2023; Sharifi et al. 2024). Ebrahim Ghasemi-Nejad's remarkable research on the stratigraphic analysis of various Mesozoic deposits in Iran has made significant contributions to our understanding of the geological history of the region (Mafi et al. 2013; Rabbani et al. 2013; Sarfi et al. 2014). Overall, the first palynology studies of various Mesozoic

formations in Iran marked an important milestone in the study of the country's geological history (e.g. Mafi et al. 2013).

Since receiving his master's degree, his involvement in the field of foraminifera demonstrated his deep expertise and passion for this area of research. Additionally, his expertise in the field of foraminifera may have contributed to his recognition of the importance of interdisciplinary research because foraminifera are often studied alongside other fossil groups, such as dinoflagellate cysts (Davtalab et al. 2018). Ghasemi-Nejad's research on foraminifera in Iran examined various aspects of these microorganisms, such as their role in biostratigraphy and paleoecology (e.g. Nafarieh et al. 2019).

Ebrahim Ghasemi-Nejad led research groups dedicated to studying the K/Pg transition in the Alborz (Rostami et al. 2013) and Zagros basins (Beiranvand and Ghasemi-Nejad 2013; Beiranvand et al. 2013, 2014). Under his leadership, the research teams employed palynomorphs to investigate paleoclimate, paleoecology, and paleoenvironment. They successfully reconstructed past climate conditions during the deposition of the Upper Cretaceous Kazhdumi Formation in the South Pars gas field of the Persian Gulf by analyzing the distribution and abundance of palynomorphs in sedimentary rock layers and recording gamma-ray spectra from boreholes (Ghasemi-Nejad et al. 2010). Additionally, Ghasemi-Nejad led a team that conducted research on Eocene climatic events, based on dinoflagellate cyst assemblages in the Kopeh-Dagh basin in northeastern Iran (Moshirfar et al. 2013).

Ghasemi-Nejad et al. (1999) introduced a formula utilizing dinoflagellate cyst morphotypes to discern regression and transgression patterns:

$$[(\text{chorate}/\text{proximochorate} + \text{proximate} + \text{cavate})]$$

This formula identifies sea-level fluctuations by assessing changes in the ratio of chorate forms to the sum of proximochorate, proximate, and cavate forms. He was particularly interested in using palynology to examine sea level changes. His team investigated how these changes manifest in the palynological record (Beiranvand et al. 2013; Zarei and Ghasemi-Nejad 2014; Davtalab et al. 2017; Farmani et al. 2020; Maleki-Porazmiani et al. 2020). The studies reveal vital information about past sea level fluctuations in different basins of Iran and their possible correlation with sea-level changes. Through an analysis of the distribution and abundance of palynomorphs in sedimentary strata, Ghasemi-Nejad and his research team were able to reconstruct past environmental conditions (Zarei and Ghasemi-Nejad 2013; Ghourchaei et al. 2014; Allameh and Ghasemi-Nejad 2016; Sabbaghiyan et al. 2020).

Ghasemi-Nejad and his research team conducted a comprehensive study including biostratigraphy, depositional parameters, and geochemical analysis to evaluate the petroleum potential of the Aptian–Cenomanian Kazhdumi Formation (Mirzaloo and Ghasemi-Nejad 2012) and the Lower Cretaceous (Barremian–Albian) strata in the Kopeh-Dagh Basin in northeastern Iran (Sharifi et al. 2019).

His passion for scientific exchange motivated him to engage in collaborations with international researchers. Professor Piero Gianolla from the University of Ferrara and Professor Guido Roghi from the Italian National Research Council visited Iran at the invitation of Ghasemi-Nejad. Together, they collaborated on research in the Koppeh-Dagh Basin and co-authored publications (Mazaheri-Johari et al. 2021, 2022). He also collaborated with Professor Martin Head, from November 2006 to August 2007, through a sabbatical visit to Brock University. Their partnership included joint publications (e.g. Ghasemi-Nejad et al. 2008, 2009), which enabled them to share knowledge and expertise and further promote their research in palynology.

5. Education and development of the next generation of paleopalynologists in Iran

Over the course of his life, Professor Ghasemi-Nejad earned considerable trust and confidence from his colleagues and students. As a supervisor, he played a key role in educating and training the next generation of paleontologists. With the expansion of facilities at the University of Tehran, he supervised numerous graduate students. Based on statistics available at the University of Tehran, he served as a supervisor for six PhD and twenty-seven master's theses at the University of Tehran. He also supervised several theses at Ferdowsi University of Mashhad and the RIES at the master's and doctoral levels. Through his dedication and expertise, he instilled in his students a deep appreciation for the importance of paleontology in understanding Earth's history.

One of the most notable qualities that characterize Professor Ghasemi-Nejad was his willingness to share his knowledge and expertise with anyone interested in the field of paleopalynology. He not only trained his students at the University of Tehran but also welcomed all interested students to his laboratory and provided them with guidance and mentorship. His open-door policy and willingness to collaborate with others helped foster a sense of community within the field of paleontology. This approach not only enriched learning experience of students but also expanded the scope and impact of his research. His contributions in this field will certainly be recognized for many years to come.

6. Poetry, charity, and perspective

In addition to his contributions to the field of palynology, Ebrahim Ghasemi-Nejad was also a talented poet whose work reflects his deep connection to the natural world. His poetry often explores themes related to the beauty and complexity of nature. Colleagues and peers appreciated his poetry, noted his profound understanding of the natural world, and admired his ability to capture the spirit of the landscapes he studied. His works are characterized by vivid imagery, rich symbolism, and a deep sense of wonder and awe at the complexity and diversity of nature.

Through his poetry, Ghasemi-Nejad created a deep emotional connection with his readers, inspiring them to appreciate the beauty and fragility of the natural world and think about their place in it. His works demonstrate the

inspirational and transformative power of art and literature as well as the important role that art plays in helping people understand and appreciate the world. In addition to appreciating nature, Ghasemi-Nejad's poetry addresses the plight of human suffering. He used his poetic voice to call attention to the plight of people who are marginalized or oppressed, highlighting their struggles and inviting readers to join him in seeking justice and peace. After Ghasemi-Nejad passed away, his family decided to honor his legacy and contributions to literature by publishing a collection of his poems. The book, titled *Avaye Zamfir* (Ghasemi-Nejad, 2021), is a compilation of some of his most evocative and powerful works, capturing the beauty and complexity of the natural world, while expressing the profound sense of wonder he felt about it.

After Ghasemi-Nejad's death, his generous philanthropy came to light. According to those close to him, he discreetly supported rural families in his hometown by donating a portion of his income to help them meet basic needs and improve their quality of life. His generosity has made a real difference in the lives of many families who are struggling to make ends meet. Ebrahim Ghasemi-Nejad's legacy continues to have a positive impact on the training of aspiring geologists. Indeed, the Ghasemi-Nejad Scholarship, funded by his family, provides important financial support to students of the Department of Geology at the University of Tehran. This scholarship honors his memory by providing educational opportunities for students who are facing financial hardship to pursue their studies in geology.

As a geologist, he had a deep understanding and appreciation of the natural world, which he considered his laboratory. At the 20th Iranian Geological Symposium held in Tehran, Iran, Professor Ghasemi-Nejad gave a passionate speech expressing his deep love and respect for nature (Figure 1).

Sometimes, the question of whether geology is a science, an art, or a passion arises. Many colleagues believe that some of the topics labeled as science are not actually science. For example, though they agree that medicine is a science, it is not so in the same way. Is a good orthopedist a scientist or an artist? Is a good surgeon a good scientist or an artist? The same question is also raised about geology. Is geology a science, an art, or a passion? The correct answer to this question has not yet been found.

However, I believe that geology is undoubtedly a science. When a question is raised, we look for the answer, and therefore, it is a science. We solve problems that arise in various places—in mines, oil, and industries, so geology is a science.

Geology may also be considered an art because a person can choose the subject as a profession, work as a geologist for thirty years, and ultimately retire and do a good job. Were they not an artist, they would have only performed a job. However, if the geologist is also an artist, the story is different. When they enter their laboratory, it is not a small room filled with microscopes. Instead, their laboratory is the entire Earth, encompassing nature itself. They have a deep connection with this vast laboratory. Indeed, if the geologist is an artist and truly passionate about their subject, they look to nature.

7. Illness and death

Sadly, Ebrahim Ghasemi-Nejad passed away from complications of Covid-19 on December 18, 2020. His passing represents a great loss not only for his family and loved ones but also for the scientific community at large, which has lost a brilliant mind and a passionate advocate for the importance of palynology in Iran and beyond. Ebrahim Ghasemi-Nejad's final resting place is at Tehran's Behesht Zahra Cemetery, Section 1, Row 64, Lot 239. Although he may have passed away, his contributions to the field of geology and his influence as a teacher and mentor as well as his philanthropic efforts continue to inspire and shape the future of paleontology for generations to come.

The foraminifera genus *Ebrahimiella* Yazdi-Moghadam and Schlagintweit was named after the late Professor Ebrahim Ghasemi-Nejad, an eminent geologist who made significant contributions to the study of Iranian geology during his tenure at the University of Tehran (Yazdi-Moghadam and Schlagintweit 2021).

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References

Allameh M, Ghasemi-Nejad E. 2016. Palynology and palynofacies of Santonian–Maastrichtian strata (Abtalkh Formation) in the eastern Koppeh-Dagh Basin, NE of Iran. Arabian Journal of Geoscience. 9(3): 207.

Assereto R. 1966. The Jurassic Shemshak Formation in Central Elburz (Iran). Rivista Italiana di Paleontologia e Stratigrafia. 72:1133–1182.

Assereto R, Barnard PDW, Fantini Sestini N. 1968. Jurassic stratigraphy of Central Elburz. Rivista Italiana di Paleontologia e Stratigrafia. 74:1–21.

Beiranvand B, Zaghbib-Turki D, Ghasemi-Nejad E. 2014. Integrated biostratigraphy based on planktonic foraminifera and dinoflagellates across the Cretaceous/Paleogene (K/Pg) transition at the Izeh section. Comptes Rendus Palevol. 13(4):235–258.

Beiranvand B, Ghasemi-Nejad E. 2013. High-resolution planktonic foraminiferal biostratigraphy of the Gurpi Formation, K/Pg boundary of the Izeh Zone, SW Iran. Revista Brasileira de Paleontologia. 16(1):5–26.

Beiranvand B, Ghasemi-Nejad E, Kamali MR. 2013. Palynomorphs' response to sea-level fluctuations: a case study from Late Cretaceous – Paleocene, Gurpi Formation, SW Iran. Geopersia. 3:11–24.

Davtalab E, Vahidinia M, Ghasemi-Nejad E, Ashouri AR. 2018. Planktonic foraminifera and dinoflagellate cysts from the Upper Cretaceous Abderaz Formation in the Koppeh-Dagh Basin, NE Iran. Stratigraphy. 15(1):47–66.

Davtalab E, Nejad EG, Vahidinia M, Ashouri AR. 2017. Palynofacies-based sequence stratigraphy of the Upper Cretaceous strata (Abderaz Formation) in east of Koppeh-Dagh Basin, Northeast of Iran. Geopersia. 7:153–168.

Farmani T, Ghasemi-Nejad E, Beiranvand B, Maleki-Porazmiani S. 2020. Biozonation, paleobathymetry, and paleoenvironmental study of the Gurpi Formation in southwestern Iran. Iranian Journal of Earth Sciences. 12:54–68.

Ghasemi-Nejad E, Ardakani EP, Ruffell A. 2010. Palaeoclimate change recorded in Upper Cretaceous (Albian–Cenomanian) Kazhdumi Formation Borehole SPECTRAL Gamma-Ray Logs, South Pars Gas field, Persian Gulf. Palaeogeography, Palaeoclimatology, Palaeoecology. 291(3-4):338–347.

Ghasemi-Nejad E, Esmaili P, Majidifard MR, Sharifi MA. 2023. Biostratigraphy of Bajocian–Oxfordian strata based on dinoflagellate cysts and ammonites from the Dalichai Formation, northeastern Iran. Palaeoworld. doi: 10.1016/j.palwor.2023.04.003.

Ghasemi-Nejad E, Head MJ, Naderi M. 2009. Palynology and petroleum potential of the Kazhdumi Formation (Cretaceous: Albian–Cenomanian) in the South Pars field, northern Persian Gulf. Marine and Petroleum Geology. 26(6):805–816.

Ghasemi-Nejad E, Head MJ, Zamani M. 2008. Dinoflagellate cysts from the Upper Triassic (Norian) of northeastern Iran. Journal of Micropalaeontology. 27(2):125–134.

Ghasemi-Nezhad E. 2021. Avaye Zamfir. Tehran: berkeh Khorshid Press. p. 150. pp.

Ghasemi-Nejad E, Sarjeant WAS, Gygi R. 1999. Palynology and paleo-environment of the uppermost Bathonian and Oxfordian (Jurassic) of the northern Switzerland sedimentary basin. Schweizerische Paläontologische Abhandlungen. 119:130p.

Ghourchaei SH, Ghasemi-Nejad E, Vahidinia M, Ashouri AR. 2014. Paleoenvironmental reconstruction of the Upper Cretaceous succession (Abtalkh Formation) of the Kopeh-Dagh Basin, northeastern Iran based on foraminiferal and palynological analyses. Arabian Journal of Geoscience. 8(4):2153–2168.

Kimyai A. 1974. Jurassic plant microfossils from Iran. Birbal Sahni Institute of Palaeobotany Special Publication. 3:1–8.

Kimyai A. 1975. Jurassic palynological assemblages from the Shahrud region, Iran. Geoscience and Man. 11(1):117–121.

Kimyai A. 1977. Further information on the palynological stratigraphy of the Mesozoic coaly sediments from Kerman, Iran. Iranian Petroleum Institute, Proceeding of the 2nd Geological Symposium of Iran, Tehran: p. 191–217.

Mafi A, Ghasemi-Nejad E, Ashouri A, Vahidi-Nia M. 2013. Dinoflagellate cysts from the Upper Bajocian–Lower Oxfordian of the Dalichai Formation in Binalud Mountains (NE Iran): their biostratigraphical and biogeographical significance. Arabian Journal of Geoscience. 7(9): 3683–3692.

Maleki-Porazmiani S, Ghasemi-Nejad E, Farmani T. 2020. Palynology and sequence stratigraphy of the Albian-Cenomanian strata from the Koppeh-Dagh Basin, northeastern Iran. Geopersia. 10:351–365.

Mazaheri-Johari M, Kustatscher E, Roghi G, Ghasemi-Nejad E, Gianolla P. 2021. A monotypic stand of *Neocalamites iranensis* n. sp. from the Carnian Pluvial Episode (Late Triassic) of the Aghdarband area, NE Iran (Turan Plate). Rivista Italiana di Paleontologia e Stratigrafia. 127:189–209.

Mazaheri-Johari M, Roghi G, Caggiati M, Kustatscher E, Ghasemi-Nejad E, Zanchi A, Gianolla P. 2022. Disentangling climate signal from tectonic forcing: the Triassic Aghdarband Basin (Turan Domain, Iran). Palaeogeography, Palaeoclimatology, Palaeoecology. 586:110777.

Mirzaloo M, Ghasemi-Nejad E. 2012. Combined use of palynology and organic geochemistry in petroleum potential evaluation and paleoenvironmental interpretation of the Kazhdumi Formation (Aptian-Cenomanian) in the southwestern Zagros Basin, Iran. Geopersia. 2:27–40.

Moshirfar Y, Mahdavi M, Ghasemi-Nejad E, Ashouri AR. 2013. Eocene climatic events recorded in dinoflagellate cyst assemblages from the Kopeh-Dagh Basin, NE Iran; a statistical approach. Arabian Journal of Geoscience. 8(2):867–876.

Nafarieh E, Boix C, Cruz-Abad E, Ghasemi-Nejad E, Tahmasbi A, Caus E. 2019. Imperforate larger benthic foraminifera from shallow-water carbonate facies (Middle and Late Eocene), Zagros Mountains, Iran. Journal of Foraminiferal Research. 49(3):275–302.

Rabbani J, Ghasemi-Nejad E, Ashori A, Vahidinia M. 2013. Quantitative palynostratigraphy and palaeoecology of Tethyan Paleocene–Eocene red beds in north of Zagros sedimentary basin, Iran. Arabian Journal of Geoscience. 8(2):827–838.

Rostami MA, Vahidinia M, Ghasemi-Nejad E, Sadeghi A. 2013. Biostratigraphy and Mass Extinction Pattern across the Cretaceous/Paleogene Boundary, Northern Alborz, Iran. Open Journal of Geology. 03(01):33–38.

Ruttner AW. 1984. The pre-Liassic basement of the eastern Kopet Dagh Range. Neues Jahrbuch für Geologie und Paläontologie - Abhandlungen. 168(2-3):256–268.

Sabbaghiyan H, Aria-Nasab M, Ghasemi-Nejad E. 2020. The palynology of the Nayband Formation (Upper Triassic) of the Tabas Block, Central Iran. Review of Palaeobotany and Palynology. 282:104308.

Sarfi M, Ghasemi-Nejad E, Mahanipour A, Yazdi-Moghadam M, Sharifi M. 2014. Integrated biostratigraphy and geochemistry of the lower Cretaceous Radiolarian Flood Zone of the base of the Garau Formation, northwest of Zagros Mountains, Iran. Arabian Journal of Geoscience. 8(9):7245–7255.

Seyed-Emami K. 1971. The Jurassic Badamu Formation in the Kerman region, with some remarks on the Jurassic stratigraphy of Iran. Geological Survey of Iran, Report. 19:1–80.

Sharifi M, Foroughi F, Ghasemi-Nejad E, Shekarifard A, Yazdi-Moghadam M, Sarfi M. 2019. Integrated biostratigraphy, depositional setting, and geochemical analyses for petroleum potential evaluation of the lower Cretaceous (Barremian – Albian) strata of the Koppeh-Dagh basin, northeastern Iran. Acta Geologica Sinica - English Edition. 93:1885–1899.

Sharifi M, Yazdi-Moghadam M, Ghasemi-Nejad E, Sarfi M, Foroughi F. 2024. Integrated biostratigraphy (orbitolinids, calcareous nannofossils, and palynomorphs) of the Lower Cretaceous Sarcheshmeh Formation, western Koppeh-Dagh Basin, NE Iran. Cretaceous Research. 153: 105696.

Wheeler JW, Sarjeant WAS. 1990. Jurassic and Cretaceous palynomorphs from the central Alborz Mountains, Iran: their significance in biostratigraphy and palaeogeography. Modern Geology. 14:267–374.

Yazdi-Moghadam M, Schlagintweit F. 2021. Cenomanian "orbitoliniform" foraminifera—State of the art and description of *Ebrahimiella dercourti* (Decrouez and Moullade, 1974) gen. et comb. nov. (family Coskinolinidae) from the Sarvak Formation (SW Iran, Zagros Zone). Cretaceous Research. 126:104885.

Zarei E, Ghasemi-Nejad E. 2013. Sedimentary and organic facies investigation of the Gurpi Formation (Campanian–Paleocene) in southwest of Zagros, Iran. Arabian Journal of Geoscience. 7(10):4265–4278.

Zarei E, Ghasemi-Nejad E. 2014. Sequence stratigraphy of the Gurpi Formation (Campanian–Paleocene) in southwest of Zagros, Iran, based on palynomorphs and foraminifera. Arabian Journal of Geoscience. 8(6): 4011–4023.