

Dr. Maria Antonieta Lorente
Palynologist / Stratigrapher

M. A. Lorente has over 40 years of experience in biostratigraphy. Her palynology expertise includes Late Paleozoic spores and Mesozoic through Neogene pollen, spores and dinoflagellates. She has had extensive expertise in northern South America's Mesozoic-Cenozoic biostratigraphy, several US onshore basins, including the Paleozoic of the Western Interior Seaway and Permian Basin, and also the Triassic-Jurassic of Kurdistan, Cretaceous through Neogene of Belize and Nicaragua, and the Cretaceous - Paleogene of diverse areas, such as the South Atlantic and Oman. Expert in palynofacies, palynological organic matter, and thermal maturation studies on palynological kerogen concentrates, integration of results from different fossil groups and preparation of consolidated bio-chronostratigraphic reports. Coordination of multidisciplinary teams and project management. Competence evaluation in stratigraphy, biostratigraphy, and petroleum geology.

Work Experience

Industry

- 2019 – to date **Ellington Geological Services, LLC, Houston, Texas.**
Senior Advisor.
- 2014 – 2019 **ALS Oil and Gas, Reservoir Laboratories – Ellington, Houston, Texas.**
Stratigraphic Services Manager. Senior Stratigrapher and Palynologist.
- 2103 – 2014 **Ellington and Associates Inc. Houston, Texas.**
Stratigraphic Services Manager. Senior Palynologist.
- 2011 - 2015 **Schlumberger, Next.**
Biostratigraphy Consultant. Providing courses in Biostratigraphy and Stratigraphy at international level and Competence Assessment.
- 2007 - 2011 **Luzon, S.L. Murcia, Spain.**
Responsible for Research & Development and Environmental Issues, Luzón S.L. Environmental Unit* and R+D Coordination.
Environmental Management System (ISO 14001:2004).
- 2002 - 2006 **GeoAmbio, Barcelona Spain.**
President and owner. Consulting firm in Geology and Environmental Science.
- 1997 - 2001 **PDVSA. Exploration, Caracas, Venezuela.**
Planning and Strategies Manager (2000 – 2001)
Stratigraphy Knowledge Area Leader (1998 – 2000)
Head Laboratories & Geological Services (1997 – 1998)
- 1980 - 1997 **Maraven, S.A. Caracas, Venezuela**
Head Specialized Geological Services (1992 – 1997)
Senior Palynologist, Maraven, S.A. Caracas, Venezuela (1986 – 1989)

Junior Palynologist, Maraven, S.A. Caracas, Venezuela (1980 – 1983)

Academy

1997 – Present

Central University Venezuela. Geology, Geophysics and Mines Department

On-line teaching. Professor Advanced Stratigraphy, Modeling in Stratigraphy, Applied Biostratigraphy, Seminar in Geology, S2S Analysis of Sedimentary Systems.

1990 – 1992

Hugo de Vries Laboratory, University of Amsterdam, The Netherlands

Research Staff. Palynology.

1978 – 1980

Central University Venezuela. Geology, Geophysics and Mines Department

Lecturer in Paleontology and Historical Geology,

Education

Doctor (PhD) in Mathematics and Natural Sciences, University of Amsterdam, The Netherlands. 1987.

- Thesis title: Palynology and Palynofacies of the Upper Tertiary in Venezuela. Mentor: Thomas van der Hammen. *Cum Laude*.

MSc Sedimentary Geology, Central University of Venezuela, Caracas. 1983

Geological Engineer, Central University of Venezuela. 1er in class. 1976

- Thesis title: The Capadare Limestone and its stratigraphic relationship with the Agua Salada Basin, Falcon, Venezuela. Mentor: Maria Lourdes Diaz de Gamero.

Computer skills

Microsoft Office Suite, Tilia (Palynological Diagrams).

Languages

English (Fluent); Spanish (Mother Tongue).

Publications

2025. Lorente, M. A., & Al, A. Rimas Imperfectas. Vol. 1: Las Estaciones y Poemas Cortos Inconexos. Zenodo. <https://doi.org/10.5281/zenodo.15914474>

2025. Smith, V., Moscardelli, L., Lorente, Olariu, M. I., and Bord, D. Quantitative palynology of the Paleocene Lower Wilcox Group of Texas: Taxonomy, Biostratigraphy, and Paleoecology. Research Papers. University of Texas at Austin, B.E.G., Accepted. In press.

2025. Sharma, N., Smith, V., Moscardelli, L., Olariu, M. I., Ambrose, W. A., Bord, D., Giraldo-Gómez, V., Lorente, M. A. and Kocsis, L. Paleoclimate and Paleoecology of the Selandian-Thanetian Transition Event (Stte) in the Lower Wilcox, Texas Gulf Coast (April 30, 2025). Available at SSRN: <https://ssrn.com/abstract=5247658> or <http://dx.doi.org/10.2139/ssrn.5247658>

2025. Noto, C. R., Flaig, P. P., & Lorente, M. A. Multiproxy synthesis at the Arlington Archosaur Site: New insights into Cretaceous paralic paleoenvironments and regional stratigraphy, Woodbine Group, Texas, USA. *Sedimentologica*, 3(1). <https://doi.org/10.57035/journals/sdk.2025.e31.1435>

2025. Lorente, M, Noto, C., Flaig, P. A Glimpse into the Late Cretaceous (Cenomanian) Palynology of the Arlington Archosaur Site, Texas, USA. *Palynology*. <https://doi.org/10.1080/01916122.2024.2441667>

2024. Smith, V., Hessler, A., Moscardelli, L., Bord, D., Olariu, M., Lorente, M. A., Sivil, E and Liu, X. . A late refugium for Classopollis in the Paleocene Lower Wilcox Group along the Texas Gulf Coast *Geology* 52 (4), 251-255

2021- Lorente, M.A. Palynofacies, environments, and climate changes in the Magdalena River Basin. Preprint. doi: <https://doi.org/10.1101/2021.03.07.434303>

2021 - Lorente, M.A. First results from a quantitative palynofacies study of recent environments from the lower Magdalena River Basin, Colombia. Attachment 1. Supplement 434303. File 02.pdf. <https://doi.org/10.1101/2021.03.07.434303>

2020 - Capello, M. A., Lorente, M. A., Serrano, I., Flores, M., & Briceno, M. G. (2020, October 21). The Evolution of Women’s Role in Engineering and Geosciences in the Oil Industry From the 20th to the 21st Century: A Documented Case History From Venezuela. Society of Petroleum Engineers. doi:10.2118/201359-MS

2011 – Salazar M., Moscardelli L., Fisher W., and Lorente M. A., Tectonostratigraphic evolution of the Morichito piggyback basin, Eastern Venezuelan Basin. *Marine and Petroleum Geology* 28, p. 109–125

2009 - (**Book**) James K., Lorente M.A. and Pindell J. The Origin and Evolution of the Caribbean Plate. James K., Lorente M.A. and Pindel J Editors. Special Publication 328, Geological Society of London. 868 p.

2009 - Cooney Ph. & Lorente, M.A. A structuring event of Campanian age in western Venezuela, interpreted from seismic and palaeontological data. In *Geology and the Origin of the Caribbean Plate*, edited by K. James, M.A. Lorente and J. Pindell. Geological Society SP 328, London, p. p. 687-703.

2009 –James, K. And Lorente M.A. The Pacific Origin Paradigm (POP) should be questioned for the Caribbean Plate, Keith James and Maria Antonieta Lorente. *Geoscientist* Volume 19, No 9, p. 12-15.

2006 - Report on Conference. James, K and M.A. Lorente., Conference Reports - Origin of the Caribbean Plate Conference. Episodes. *International Geoscience Newsmagazine*, 2006; 29 (4), p. 299-300. ISSN: 0705-3797

2004 - Rey, O., Simo, J.A. and Lorente, M. A., A record of long- and short-term environmental and climatic change during OAE3: La Luna Formation, Late Cretaceous (Santonian–early Campanian), Venezuela. *Sedimentary Geology*, vol. 170 p. 85–105

2003 - Gonzalez, E., Prokoph, A. and Lorente, M.A., Orbital Cyclicity Detected In K-T Boundary, Western Venezuela. Annual Meeting Geological Soc. Canada Memoir.

2003 - Parra M., L. Moscardelli and M. A. Lorente, Late Cretaceous Anoxia and Lateral Microfacies Changes in the Tres Esquinas Member, La Luna Formation, Western Venezuela. PALAIOS, vol 18, No. 4 – 5, p 321 - 333

2003 - Zapata E., Padron V., Madrid I., Kernutz V., Truskowski I and Lorente M. A., Biostratigraphic, sedimentologic, and chemostratigraphic study of La Luna Formation (Late Turonian – Campanian) in the San Miguel and Las Hernandez Sections, Western Venezuela. PALAIOS, vol 18, No. 4 – 5, p. 367 - 377

2003 - Bralower T. and Lorente M.A. Paleogeography and Stratigraphy of the La Luna Formation and related Cretaceous Anoxic Depositional Systems. PALAIOS, vol 18, No. 4 – 5, p. 301 – 304

2002 - Durán I., M. Ruiz, A. Fasola, M. A. Lorente. , Biofacies Development Related To Upwelling Systems, Based On High Resolution Biostratigraphic Studies In Southwest Venezuela. Courier Forschungsintitut Senckeberg, Alemania

2000 - Erlich R. N., O. Macsotay, A. J. Nederbragt & M.A. Lorente., Birth and death of the Late Cretaceous “La Luna Sea” and origin of the Tres Esquinas phosphorites. Journal of South American Earth Sciences. Vol.13, p. 21 – 45.

2000 - Armentrout J. M., M.A. Lorente, B. Ozuma & S. Van Heck. Industrial Paleontology, Fossils and the Future, Paleontology in the 21st Century ed. R. Lane, F. Steininger, R. Kaesler, W. Ziegler & J. Lipps. Senckenberg – Buch, No. 74, 83 – 102, Frankfurt, Alemania.

2000 - Simmons M. D., S.L. Cady, M.A. Lorente, X. I. Mu, R.S. Nicoll, M. B. Ozumba, R.W. Scott, Y. Shen, W. Sun, S. Van Heck & M. Walter. Issue 4: Interdisciplinary en Fossils and the Future, Paleontology in the 21st Century ed. R. Lane, F. Steininger, R. Kaesler, W. Ziegler & J. Lipps. Senckenberg – Buch, No. 74, 29 – 30, Frankfurt, Alemania.

2000 - Parrish J.T., P. Koch, W. Allmon, G. Ashley, R. Cuneo, M.A. Lorente & E. Schindler. Paleoclimatology en Fossils and the Future, Paleontology in the 21st Century ed. R. Lane, F. Steininger, R. Kaesler, W. Ziegler & J. Lipps. Senckenberg – Buch, No. 74, 167 – 172, Frankfurt, Alemania.

1999 - Erlich R.N., O. Macsotay, A.J. Nederbragt & M.A. Lorente. Palaeoceanography, palaeoecology and depositional environments of Upper Cretaceous rocks of Western Venezuela. Palaeogeography, Palaeoclimatology, Palaeoecology, vol. 153, p. 203 – 238.

1999 - Erlich R. N., S.E. Palmer_Koleman and M.A. Lorente. Geochemical characterization of oceanographic and climatic changes recorded in Upper Albian to Lower Maastrichtian strata, Western Venezuela. Cretaceous Research, vol. 20, p. 547 - 581.



1998 - Pestman, S. Ghosh, L. Melendez. & M.A. Lorente., Marco Tectonoestratigrafico y paleogeografía de la Cuenca de Maracaibo y áreas vecinas durante el Paleogeno. Bol. Soc. Venez. De Geólogos, vol. 23, No.1, 28 – 45.

1997 - Erlich, R. N., Nederbragt, A. J. and Lorente, M. A., Origin and depositional Environments of Turonian – Maastrichtian organic rich and phosphatic sediments of Western Venezuela. In VI Simposio Bolivariano de Exploración en la Cuenca Subandinas. Asociacion Colombiana de Geólogos y Geofísicos del Petróleo. Memorias Vol. 1, p. 195 – 204.

1997 - Lorente; M. A. Paleontología Siglo XXI. Bol. Soc. Venezolana Geólogos, vol. 22, No. 2, p. 53 - 54

1997 - Lorente M.A., G. Sánchez, T. Monjak M.A., J.H. Ríos , L. De Abreu & J. Pasquali., Estudio de la oferta y la demanda de profesionales en el área de la minería: Primer Trimestre 1995. Bol. Soc. Venez. de Geólogos, vol. 22, No.1, 65 – 70.

1997 - Lorente M.A, Rull V., Ruíz M., Durán I., Truskowski I., y DiGiacomo E. Nuevos aportes para la datación de los principales eventos tectónicos y unidades litoestratigráficas de la Cuenca de Maracaibo, Venezuela Occidental. Boletín de Geología, Ministerio de Energía y Minas, Caracas, vol. XVIII (31), p. 33 - 50.

1997–Gómez M.; Cassani F. y M.A. Lorente., Nuevas determinaciones de carbono orgánico total (COT) en formaciones cretácicas con perfiles convencionales en el noroeste del Lago de Maracaibo. Estado Zulia. Memorias VIII Congreso Geológico Venezolano. SVG. Tomo 1.

1997–Lorente M.A. y Contreras C. Datación de Secuencias oligomiocenas en el área de Alturitas y sus implicaciones para el conocimiento de la evolución tectono-estratigráfica de Perijá. Memorias VIII Congreso Geológico Venezolano. SVG. Tomo 1.

1997–Rull V. y M. A. Lorente. Area central del Lago de Maracaibo: la bioestratigrafía como herramienta para la interpretación paleoestructural del Eoceno. Memorias VIII Congreso Geológico Venezolano. SVG. Tomo 1.

1997–Cooney Ph. , Lorente M.A.. Implicaciones Tectónicas de un Evento Estructural en el Cretácico Superior (Santonense - Campaniense) de Venezuela Occidental. Memorias VIII Congreso Geológico Venezolano. SVG. Tomo 1. p. 195 – 204.

1997–Hidalgo, M.; Bertorelli, G.; Marquez, F.; Truskowski, I.; Duran, I. & Lorente, M. Bioestratigrafía y edad de sedimentación de la Formación Misoa en la Serranía de Trujillo. Memorias VIII Congreso Geológico Venezolano. SVG. Tomo 1.

1995 –Hoorn C., Guerrero J., Sarmiento G. & M.A. Lorente., Andean Tectonics as a cause for changing patterns in Miocene northern South America. Geology, March 1995. (Referred well over 460 times in international papers)

1993–Boesi Tr, Higgs R, Lorente Ma, et al., Facies And Sedimentary Environments Of The Cretaceous La-Luna Formation In San-Pedro-Del-Rio Section, Venezuelan Andes - A Multidisciplinary Study. AAPG Bulletin-American Association Of Petroleum Geologists 77 (2): 308-308.

1991 - Lorente, M.A. Digital image analysis: an approach for quantitative characterization of organic facies and palynofacies. Proceedings International Symposium on Organic Petrology. Mededel. Rijks Geol. Dients, v. 45, p: 103-108.

1991– Lorente, M. A. & van Bergen P. F. Summary of Organic Matter Classifications. Open Workshop on Organic Matter Classification Book. Universiteit van Amsterdam. P. 43 – 60.

1991– Conference Report Lorente M.A., The 24th Annual Meeting of the American Association of Stratigraphic Palynologists. SEP Nieuws Brief. Hugo de Vries Laboratorium. University of Amsterdam.

1990– Lorente M.A., Textural characteristics of organic matter in several sub-environments of the Orinoco Upper Delta. Geologie en Mijnbouw 69, p. 263-278.

1990– Lorente, M. A. & van Bergen, P. F., A multilevel Approach to Organic Matter Classification. Stuifmail, vol. 8, No. 2, p.9 – 16.

1988– Lorente, M.A. y Boesi, T.
Estudio estratigráfico del flanco Norandino en el sector Lobatera-El Vigía. III Simposio Bolivariano Exploratorio Petrolero de las Cuencas Subandinas, Tomo I: 2-41.

1986– (Book) Lorente M.A., Palynology and palynofacies of Upper Tertiary in Venezuela. Dissertationes Botanicae, Band 99, Berlin-Stuttgart, 222 p. (Book, Referred 119 times in international papers)

1977– Sanchez T. U. y Lorente M. A., Paleoecología del Miembro Quevedo (Formación Navay) en las proximidades de Santa Barbara de Barinas. Memorias V Congreso Geologico Venezolano. Vol. 1, p. 107 - 133.

Professional Memberships

AASPG Emeritus Member.

GSA Lifelong Member.

HGS Houston Geological Society.

SVG Sociedad Venezolana de Geólogos.