

Nannofossil biostratigraphy in industry; female pioneers in nannopaleontology and a story of life on the rigs

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<https://doi.org/10.58998/jnr3250>

The applied biostratigraphy community would like to pay tribute to contributions made to the advancement of nannofossil biostratigraphy in an offshore setting by Donata Zucchi, whose life was tragically cut short by her untimely death in 2021.

A large proportion of work on offshore oil and gas installations can be characterized by hard physical labor in occasionally dangerous, dirty conditions and uncomfortable weather conditions from the extremes of the North Sea to the heat, humidity, and hurricane season in the Gulf of Mexico. The offshore industry has been traditionally male dominated and estimates from 2021 indicate that only around 3–5% of offshore workers globally are female. From the late 1970s, when women infrequently began to work at wellsites, to the present day, the majority of female offshore workers have been employed in the catering, cleaning, medical, and administrative divisions. In the North Sea by the mid-1980s, women occasionally began to work offshore in other positions, for example, as biostratigraphy technicians. By the mid-1990s, biostratigrapher, wellsite geologist, mud-logger, and data engineer roles began to be filled by women. Today, positions traditionally filled by men, such as driller, crane operator, and roughneck, are now beginning to be occupied by women.

Biostratigraphy has been used in real-time offshore hydrocarbon exploration for approximately five decades. Initially, microfossil (mainly foraminifera) biostratigraphy was utilized, paving the way for expansion into the use of nannofossil biostratigraphy, which was routinely used in North Sea exploration and the development of Cretaceous and Paleogene chalk oil and gas fields. Today, applied, real-time nannofossil biostratigraphy has global applications and covers the stratigraphic column from the Jurassic to the Recent. The use of biostratigraphy on offshore oil and gas installations is one of the pioneering jobs that introduced women into the offshore world on an equal footing, a world that has changed significantly since the 1970s and 1980s!

Donata Zucchi embraced the changes and challenges of offshore life with enthusiasm, good humor, and intelligence in a career spanning 25 years “in the field”, which often took her to extremely challenging environments, including West Africa, Mexico, and the northernmost extremes of the North Sea. We are extremely grateful to her for her pioneering efforts.