Available online http://amq.aiqua.it
ISSN (print): 2279-7327, ISSN (online): 2279-7335

Alpine and Mediterranean Quaternary, 32 (1), 2018, I - III

FRANCESCO PAOLO BONADONNA: A TALE OF A QUATERNARIST

Gabriello Leone, Giovanni Zanchetta

Francesco Paolo Bonadonna (known to everyone as “Antonello”) passed away on November 2017. Born in Rome in 1934 and graduated in Geological Science in 1961 at the local university, he dedicated all his life to scientific research and teaching. Notably, during the 60s/80s of the last century, he was considered an actual innovator in the application of the geochemical and geochronological techniques to the Quaternary Geology. He worked in Rome until 1968 starting as a stratigrapher, exemplary for those years are his works on the stratigraphy of the Lazio region, on a paleoecological and paleoclimatological base, carried on along with his colleague P. Ambrosetti (Bonadonna, 1968). Moreover, he devoted himself to the study of diatoms and varved deposits within the Uppsala University.

Upon his arrival at the University of Pisa with the purpose of studying the geochronology of quaternary successions, he establishes himself as an eclectic researcher within the Nuclear Geology Laboratory, an innovative university institute and a melting pot of ideas and scientific minds created and led by Ezio Tongiorgi. In this framework, he designs and makes operational, along with colleague Claudio Arias, a laboratory of palaeomagnetic measures (Arias et al., 1980, 1984); he also collaborates, along with Giulio Bigazzi, to the development of distal tephrostratigraphy and tephrochronology, using the fission tracks method (Bigazzi & Bonadonna, 1988; Bigazzi et al., 1996), a methodology used, with great intuition, also for the identification of exploitation areas of obsidian during the Neolithic period (Bonadonna & Bigazzi, 1973).

He publish a summary document of the quaternary chronostratigraphy of the Italian regions (Ambrosetti et al., 1972), and he works on the construction of magnetostratigraphic scales of neogenic and quaternary sediments of the Mediterranean basin. Throughout his career he is also active in the reconstruction of the relative sea level variations: for many years he is vice-president of the INQUA subcommittee for the Mediterranean Area (Bonadonna & Campetti, 1987).

It is also remarkable his dedication to work alongside archeologists: he was appointed as the geology expert during several archaeological campaigns in the Libyan Sahara region during the 70s and the 80s, published several articles with geoarchaeology and archaeometric contributions, and was a lecturer for the Prehistoric Archeology Graduate School in Pisa from 1968. Starting from halfway in the 80s, he began a long scientific partnership with Gabriello Leone, who was already active in the field of stable isotopes geochemistry, working intensively on the palaeoclimatic and palaeoenvironmental applications of methodologies based on the isotopic composition of oxygen and carbon. He focuses in particular on the continental successions, in the Mediterranean and South American areas (Bonadonna & Leone, 1995; Bonadonna et al., 1999), an activity in which, from the late 90s, he receives great contribution from his former student Giovanni Zanchetta.

During all his career he nurtures and disseminates his belief on the importance of a multidisciplinary approach to scientific research, underlining the importance of a continuous large-scale correlation between geological, biological and climatic events, for a better comprehension of the history of the planet, in particular on the last 5 Ma of the Earth history in the Mediterranean area, but also on a global scale (Ambrosetti et al., 1972; Bonadonna & Alberdi, 1987; Alberdi & Bonadonna, 1989; Zanchetta et al., 1995).

In his last years of the academic career he dedicated himself to the study of the successions of the Lower Valdarno and Coastal Tuscany areas (Zanchetta et al., 2004), and of central and southern Italy, in order to find, with his multidisciplinary approach, large scale correlations between the events that characterized the area during the last Mya. Moreover, it is not possible to forget the long lasting contribution of Bonadonna to the debate of the Quaternary lower boundary he strongly suggested to be placed at ca. 2.5 Ma. The national, and part of the international scientific community, relegated him in a marginal posi-

tion. Time has proven him right.

He lectured university courses at the University of Camerino, Adis Abeba and finally as an Associate Professor in the University of Pisa: for many years he was academic of Quaternary Geology and Paleontology, then of Geology for the Environmental Sciences degree. He also lectured in Geology for the Cultural Heritage degree, teaching even after his retirement.

During his teaching tenure he tried to instill his passion and enthusiasm to all the student, young and not-so-young that crowded the so called “green laboratory” of via S. Maria in Pisa: passion and enthusiasm that were always moderated by his renowned scientific conscientiousness.

A man with a strong personality and strict principles; he was not willing to compromise and showed a considerable polemic and ideological vein, he was all the life an irreducible "companion", Antonello was a difficult person. He was a person devoid of sentimentality and expression of affection, nevertheless he was all the time a generous person, always close to the people who needed and always ready to help students and colleagues in need. In difficult times he was always a person to talk to. On the other hand, he never asked for help: when he suffered a heart attack at the university, he went alone walking to the nearby hospital without telling anybody! This harsh and hard character often brought him into sharp contrast with the official academic world and clearly limited his university career. However, he was never worried about the consequences of his convictions.

A tireless and attentive reader of the scientific literature, no matter how early we arrived at the university he was already on his desk reading a pile of papers; he was always up-to-date and he was curating meticulously the citations. Lastly, he was open-minded to all the innovation brought by the development of analytics and informatics, on the other hand he was also reminding us that in our field technology was only an instrument for getting knowledge of the causes and to reconstruct the events that occurred in an interval of time of the history of our planet. His wide and extensive scientific production,

Antonello Bonadonna in the field. The autcrops is the fluvial gravels at the base of the S. Romano formation of probable MIS 12 age. The definition of this unit was one of his last field activity.

more than one hundred and fifty publications, is there to witness the consistency of his objectives, enriched by the vastness of his interests, the curiosity for new techniques and his rigorous approach.

This volume has the purpose of recollecting the contributions by some of the people who had known him or that have beneficiated from his work as a well-rounded “quaternarist”, remembering the scientist and the man, a distinction, which sometimes proves to be very difficult for those who live and breathe this beautiful profession.

Gabriello Leone and Giovanni Zanchetta *

*G. Leone and G. Zanchetta have been, in different times and modality, scholars and partners of “Antonello”, to whose figure as a man of science and a colleague, they owe a lot.

REFERENCES

Adkins J.F., Boyle E.A., Curry W.B., Lutringer A. (2003) - Stable isotopes in deep-sea corals and a new mechanism for vital effects. Geochimica et Cosmochimica Acta, 67, 1129-1143.

Alberdi M.T. Bonadonna F.P. (editors) (1989) - Geología y Paleontología de la Cuenca de Guadix-Baza., Museo Nacional de Ciencias Naturales, CSIC, Madrid, 79-95.

Ambrosetti P., Azzaroli A., Bonadonna F.P., Follieri M. (1972) - A scheme of Pleistocene chronology for the Tyrrhenian side of central Italy. Boll. Soc. Geol. Ital., 91, 169-184.

Ambrosetti P., Bonadonna F.P. (1967) - Revisione dei dati sul Plio-Pleistocene di Roma 1967. Atti Accademia Gioenia di Sc. Nat. in Catania, 18, 33-70.

Arias C., Bigazzi G., Bonadonna F., Brunnacker K., Urgan B. (1984) - Correlation of Plio-Pleistocene deposits of the Lower Rhine Basin (North-West Germany) and the Valle Ricca pits (Central Italy). Quat. Sc. Rev. 3, 73-89

Arias C., Azzaroli A., Bigazzi G., Bonadonna F. (1980) - Magnetostratigraphy and Pliocene-Pleistocene boundary in Italy. Quat. Res., 13, 65-74.

Bigazzi G., Bonadonna F.P. (1988) - Fission track dating of a volcanic ash layer near Pisticci (Basilicata, Italy). Alpine and Mediterranean Quaternary, 1, 127-129

Bigazzi G., Bonadonna F.P., Zanchetta G. (1996) - Farola Monte Hermoso: fission-track dating of Darwin's mammals deposit in Argentina. Journal of Quaternary Science 11, 423-426.

Bonadonna F.P. (1968) - Studi sul Pleistocene del Lazio. V. La Biostratigrafia di Monte Mario e la “Fauna Malacologica Mariana” di Cerulli-Irelli. Mem. Soc. Geol. It, 7, pp. 261-321.

Bonadonna F.P., Campetti S. (1987) - Annotated bibliography of Italian quaternary shorelines (1970-1984): subcommission on Mediterranean and Black Sea shorelines. F.P. Bonadonna editor, Pacini Editore, Pisa, 480 pp.

Bonadonna F.P., Alberdi M.T. (1987) - Equus stenonis COCCHI as a biostratigraphical marker in the Neogene-Quaternary of the Western Mediterranean basin: Consequence on Galerian-Villafranchian chronostratigraphy. Quaternary Science Reviews, 6 55-66.

Bonadonna F.P., Bigazzi G. (1973) - Fission track dating of the obsidian of Lipari Island (Italy). Nature 242, 322-323.

Bonadonna F.P., Leone G. (1995) - Palaeoclimatological reconstruction using stable isotope data on continental molluscs from Valle di Castiglione, Roma, Italy. The Holocene, 5, 461-469.

Bonadonna F.P., Leone G., Zanchetta G. (1999) - Stable isotope analyses on the last 30 ka molluscan fauna from Pampa grassland, Bonaerense region, Argentina. Palaeogeography, Palaeoclimatology, Palaeoecology 153, 289-308.

Zanchetta G., Bonadonna F.P., Marcolini F., Ciampalini A., Fallick A.E., Leone G., Michelicci L. (2004) - Intra-Tyrrhenian cooling event deduced by a non-marine mollusc assemblage at Villa S. Giorgio (Livorno, Italy). Bollettino della Societa Paleontologica Italiana, 43, 331-343.

Zanchetta G., Alberdi M.T., Bonadonna F.P., Leone G. (1995) - Escenario de la evolución climática entre la Región Pampeana y el área del Mediterráneo occidental durante el Cuaternario. In: Alberdi M.T., Leone G. y Tonni E.P. (Editores), Evolución biológica y climática de la Región Pampeana durante los últimos 5 millones de años. Un ensayo de correlación con el Mediterráneo occidental. Monografías del Museo Nacional de Ciencias Naturales (CSIC), Madrid, 407-423.