

METEORITES FROM NORTHWEST AFRICA (NWA): ONE STEP FORWARD. H. Chennaoui Aoudjehane^{1,2}, A. Jambon², N. Larouci^{1,2}, S. Buhl³, T. Bunch⁴. ¹Hassan II University Casablanca, GAIA Laboratory, Moroccan Geoheritage Team, BP 5366 Maârif 20000 Casablanca, Morocco. Email: chennaoui_h@yahoo.fr. ²ISTEP Université Pierre et Marie Curie Paris6, Case 110, 4 Place Jussieu, Paris Cedex 5, France. ³Meteorite Recon, Mühlendamm 86, 22087 Hamburg, ⁴Northern Arizona University.

Introduction: Since 2000, thousands of meteorites from the Northwestern part of Africa have been classified by a number of laboratories in the world, in particular from Morocco [1, 2]. Many of these do not have information on the exact geographic origin (Morocco, Algeria, Mauritania, Niger or Mali) despite a known place of purchase. Therefore the Northwest Africa (NWA) nomenclature was coined by the Nomenclature Committee of the Meteoritical Society in 2000 [3].

The problem: No geographic locality name could be assigned to stones purchased without further informations [1]. A rule that applies only to this part of the world, i.e., « Morocco and surrounding countries » was proposed, that requires reasonable proof of the find (e.g. a picture of the meteorite in the field with the GPS showing the coordinates). Recently, despite all informations were provided and coordinates disclosed, a NWA number became the rule in place of a Moroccan locality name. This treatment is in conflict with the Nom Com own rules.

Recent way of research: Recently, private and institutional meteorite prospectors from Morocco [4] and other countries [5] have initiated systematic meteorite recovery campaigns in the South of Morocco. Moroccan prospectors specialized in meteorite field research, conduct field surveys in small groups for several weeks [4]. We educated them on the importance of recording the coordinates of these finds. After the classification, if the meteorite is rare and interesting, additional searches are organized. Although some meteorites are still from unspecified origin, most NWA meteorites have now well defined strewn fields.

Recommendations: Encouraging the finders to provide the coordinates would be an obvious scientific achievement in permitting pairing determinations. What is needed is that Nom Com's own rules should be enforced without discriminatory restrictions; for instance 1) keep the NWA nomenclature for all meteorites without coordinates, 2) NWA numbers become official synonyms to proper field names, which will avoid folkloric nicknames. 3) All documented cases must fall in the general case applicable to every country in the world.

Conclusion: A number of exceptional meteorites from Morocco have NWA numbers, such as NWA 7034 [6] and NWA 7325 [7] and their pairs, for which coordinates of the find are now known by researchers, dealers and prospectors. It is high time to change our despising view of a developing country to one of scientific recognition of the countries that provided the largest number of meteorite finds ever.

References: [1] Chennaoui Aoudjehane H. et al., 2013, 76th Meteoritical Society Meeting, abstract 5347. [2] Idomar Y. et al. 2014, 77th Meteoritical Society Meeting, abstract xxx, 2014, [3] J. N. Grossman 2000. MB84. Meteoritics & Planetary Science 35:A199-A225. [4] Bouragaa A. et al. 2014, 77th Meteoritical Society Meeting, abstract 5450. [5] Buhl S. et al. 2014, 77th Meteoritical Society Meeting, abstract 5308. [6] Agee et al., 2013, Science, 339 (6121): 780-785. [7] Irving et al., 2013, 44th Lunar & Planetary Science Conference Abstract #2164.