

**A REVIEW OF THE AFRICAN IMPACT RECORD.**

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After more than 50 years of dedicated impact cratering research on earth the overall tally of confirmed impact structures, as currently listed on the Earth Impact Database (University of New Brunswick), is 185. However, a very much larger number of possible structures has been proposed, with confirmation of their origin by hypervelocity impact – which is only possible through (1) finding of meteorite debris in impactites, (2) detection of chemical traces of the projectile, (3) observation of shatter cones, and (4) of bona fide shock metamorphic microdeformation features – still outstanding. The African impact record has recently been reviewed by us [1]. So far, just 19 structures have been confirmed in Africa to be of impact origin (only 5 more than 20 years ago when the last census was taken) – a very low number in relation to Africa's proportion of global landmass and in comparison with other, much smaller regions, such as, e.g., Scandinavia. In addition, one location with abundant shatter cones in the High Atlas mountains of Morocco, near the village of Agoudal, has been identified; an impact structure or remnant thereof has, however, not yet been delineated. As proposed and not yet confirmed impact structures in Africa are concerned, 49 of those have been listed, with some seemingly excellent targets for ground-truthing amongst them. And no less than 28 structures have already been dismissed as not being of impact origin. This overall record indicates strongly that impact cratering research has successfully been promoted in Africa, but that further ground-truthing ought to be seriously pursued – not an easy task in the face of widespread unrest on this continent. Impact cratering studies are featuring now on most African geoconferences, with variably regional geological and geophysical aspects of structures, but also environmental, metamorphic, and geoconservation issues being discussed. The study of impact craters in Africa is clearly only at the beginning. There are several problems that hinder rapid improvements of this situation. For example, many geoscientists in Africa have not had sufficient training in the rather specific aspects of mineralogy, petrography, or geochemistry that are necessary to identify impact structures. In addition, the equipment available at many African Universities and other geological institutions is often not sufficient to perform the detailed investigations that are necessary, requiring collaborations with overseas institutions. Also, planetary geology is not necessarily on the top of the agenda of countries that require more basic geological information. However, given the importance of impact cratering also as a natural hazard, and the potential economic benefits of impact structures, it is hoped that in the future more researchers will start to be interested in this topic.

**References:** [1] Reimold, W. U. and Koeberl, C. 2014. Journal of African Earth Sci. 93:57-175.