

Preparing scientific papers

uit: Weber, Robert L. *More random walks in science: an anthology.* Bristol: Institute of Physics, 1982, pp. 14-16

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From Nature 268, 100 (1977)

A great deal of time is wasted because young scientists submit papers for publication in an unacceptable form. There are many good books on the market on the preparation of scientific papers, but few specific examples as to how an unacceptable manuscript can be transformed into one acceptable by leading scientific journals. By a lucky chance (and completely legally) I was able to obtain a copy of such a manuscript with the referees' comments and a model rewritten version, from the editorial files of a leading geological journal. I pass this on in the hope that it will be of value to authors in preparing papers for publication.

COLUMNAR ROCK STRUCTURES FROM AN ANTIQUE LAND

Referees' report: manuscript 19705B/76: P B Shelley

Manuscript as submitted

Ozymandias¹ by P B Shelley²

I met a traveller² from an antique land³
Who said: Two⁴ vast⁵ and trunkless legs⁶ of stone⁷
Stand in the desert.⁸ Near them,⁹ on the sand¹⁰
Half sunk, a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive (stamped on these lifeless things),
The hand that mocked them and the heart that fed;¹¹
And on the pedestal¹² these words appear:
'My name is Ozymandias, king of kings;
Look on my works, ye Mighty, and despair!'¹³
Nothing beside remains.¹⁴ Round the decay
Of that colossal wreck, boundless¹⁵ and bare,
The lone and level sands¹⁶ stretch far away.

Referees' comments

- 1 This title is quite inadequate. Includes no keywords. See suggestion below.
- 2 Since this paper appears to be based on field observations by another geologist, we suggest joint authorship would be appropriate.
- 3 Specify.
- 4 This is the only quantitative statement!
- 5 Not specific enough. The authors should give dimensions in SI units. (Unless 'vast' is a class in some sort of grade-scale, in which case the reference to this scale should be given.)
- 6 Have alternative hypotheses been considered? Earth pillars? Basalt columns? Ant hills?
- 7 Surely identification of rock type with appropriate analyses could be provided here?
- 8 Give co-ordinates.

- 9 Specify distance. A photograph (giving scale) would help here.
- 10 Give granulometric analysis, and preferably some scanning electron microscope photographs of grain-surface textures. These don't actually prove anything, but are decorative and keep SEM operatives in employment.
- 11 This fanciful and speculative section could well be omitted.
- 12 This is the first we have heard of a pedestal!
- 13 While it may be worth-while to record the defacement of an interesting exposure, it is not necessary to quote the words. (Since they are in English, they are obviously of no archaeological interest. Presumably graffiti sprayed on by a tourist.)
- 14 Rather dogmatic. Better: 'No other rock exposures were observed'.
- 15 Inappropriate hyperbole. The approximate extent of the desert should be stated, if relevant.
- 16 Unless this is a windless desert, surely a sandy desert should show dune formation? If actually level, perhaps in fact it is a stony desert?

General remarks Although some interesting observations are recorded, we cannot recommend publication in the present form. For one thing, the paper is far too short. For another, the authors have inexplicably left out any mention of plate tectonics! For the guidance of the authors, we give below a summary of the kind of re-written and expanded paper which might be acceptable. We have had to supply, necessary missing data arbitrarily; it is, of course, up to the authors to substitute the correct data.

Suggested re-written manuscript (summary):

'Twin limb-like basalt columns ('trunkless legs') near Wadi Al-Fazar, and their relationship to plate tectonics.
Ibn Batuta¹ and P B Shelley²

In a recent field trip to north Hadhramaut, the first author observed two stone leg-like columns 14.7 m high by 1.8 m in diameter (medium vast, ASTM grade-scale for trunkless legs) rising from sand desert 12.5 km southwest of Wadi Al-Fazar (Grid 474 753). The rock is a tholeiitic basalt (table 1); 45 analyses by neutron activation technique show that it is much the same as any other tholeiitic basalt (table 2). A large boulder 6 m southeast of the columns has been identified as of the 'shattered visage' type according to the classification of Pettijohn (1948, page 72). Granulometric analysis of the surrounding sand shows it to be a multimodal leptokurtic slightly positively skewed fine sand with a slight but persistent smell of camel dung. Four hundred and seventy two scanning electron photomicrographs were taken of sand grains and forty are reproduced here; it is obvious from a glance that the grains have been derived from pre-cambrian anorthosite and have undergone four major glaciations, two subductions, and a prolonged dry spell. One grain shows unique lozengeshaaped impact pits and heart-like etching patterns which prove that it spent some time in upstate New York.

There is no particular reason to suppose that the columns do not mark the site of a former hotspot, mantle plume, triple junction, transform fault, or abduction zone (or perhaps all of these).

Keywords plate tectonics, subduction, obduction, hotspots, mantle plume, triple junction, transform fault, trunkless leg, shattered visage.

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