

F.X. VON ZACH AND THE FIFTH CONTINENT

Peter Brosche

Observatorium Hoher List, Argelander-Institut für Astronomie,
Universität Bonn, Germany.

E-mail: pbrosche@astro.uni-bonn.de

Abstract: In his journals which were devoted mainly to astronomy, Franz Xaver von Zach also presented geographical and geodetic information about Australia. Initially these accounts were in German, but towards the end of his life he wrote them in French for a more general audience.

Keywords: geography and geodesy, Australia, ca. 1800

1 INTRODUCTION

Franz Xaver von Zach (see Brosche, 1998; 2001) was born in Pest (Hungary) in 1754 and died in Paris in 1832. So his life can be attributed to the ‘Goethezeit’, more so since his most active years were spent in Gotha, near Weimar, from 1786 to 1807, where he installed and used the new observatory with Duke Ernst II (1745–1804).

However, the kind of activity most relevant to this paper relates to his founding of several scientific journals, the *Allgemeine Geographische Ephemeriden* (or *AGE*) in 1798¹ and the *Monatliche Correspondenz zur Beförderung der Erd- und Himmelskunde* (or *MC*) in 1800.² Although their titles suggested the focus was more on terrestrial issues, in fact both were intended as astronomical journals. It was in the afterglow of the peak period in Gotha that Zach was able to found a third journal. This occurred in Genoa in 1818, with the launch of the French-language *Correspondance Astronomique ...* (or *CA*).³ Unfortunately, an index of this last one has yet to be produced, so we are not in a position to make any statistical statements about its papers.

The use of geography as a means of promoting astronomy—as in the case of Zach’s first two journals—was partially a ‘camouflage’, hence Zach (1798: 157) admitted in a letter that the ‘light’ content with the human touch was a kind of ‘Korkholz’ (= cork wood) that helped him keep his journal (= ship) afloat. First of all, astronomy was (and even today partially is) intimately related to geodesy, and Zach’s own research work spanned both disciplines. Second, Zach was personally interested in including ‘soft’ (i.e. non-astronomical) topics in his journals, from adventurous discoveries in distant lands, to mercantile products and even drinking habits and linguistic digressions on names of towns etc.

2 ZACH’S JOURNALS AND THE ‘FIFTH CONTINENT’

In eighteenth century Europe, Australia was referred to as the ‘Fifth Continent’. Although the earliest European exploration of the coastal regions of Australia occurred long before 1800, when Zach’s first two journals were launched, the interior of the fifth continent provided scientists and explorers with a seemingly endless series of discoveries. Consequently, Australia (but not under this name) is well represented in Zach’s journals. Given the competition for space from other regions of the globe, the reasons for this may be manifold, but one seems to be obvious: as a result of his birth in Hungary, a country that was

largely on the edge of, rather than fully immersed in, scientific developments at the time, Zach was happy to welcome contributions to his journals from and about other ‘fringe areas’, be they in Europe (e.g. Poland, Portugal and Spain) or much further afield, like Australia.

Formally, contributions were more often than today reviews, therefore publications of second order. At that time, however, there was a greater desire and a greater necessity for such enlarged abstracts. Books were expensive, and foreign books were difficult to obtain. Consequently, famous journals existed which contained nothing but reviews, and Zach’s journals, although not of this kind, did contain elaborate reviews and articles detailing the historical development of various topics. Very often these articles and reviews included detailed comments or notes by Zach, who relied on other sources for his information.

The keywords ‘Neu-Holland’ and ‘Sydney’ appear for the first time, but only very briefly, in the first volume of the *AGE* (on page 580) in a detailed review of a map of travels around the world. But characteristically Zach notes the absence of Sydney Cove on the otherwise precise map of Neu-Holland.

Continuing to search for ‘Neu-Holland’, we find that it occurs five times in the index of the second volume of the *AGE*. The most substantial contribution is a review of David Collins’ new book about New South Wales and New Zealand which was published in London in 1798 (see *AGE*, 2: 349-362 (1798)). As the reviewer, Zach admits that initially he had been afraid to review this massive tome, but he was pleasantly surprised and ended up reading the entire book! He then describes the contents in such detail, that the reader not only encounters a short history of the foundation of the first colony, but also learns about the flora, the climate, and the indigenous people and their customs. The founding of an astronomical observatory at Sydney Cove, furnished with instruments by the British Board of Longitude, was noted with pleasure.⁴ One is led to wonder about the accuracy of the geographical co-ordinates mentioned by Zach (a longitude of 151° 19’ 30” E, and latitude of 33° 52’ 30” S).

The next two volumes of the *AGE* only refer to Neu-Holland within the context of the heights of mountains everywhere in the world.

Since 28 volumes of Zach’s second journal, *Monatliche Correspondenz ...* (or *MC*) were produced, one can expect even greater Australian coverage in this journal, and this is indeed the case, for the following

names appear more than once in the indexes: 'Neu-Holland' (five times), 'Van-Diemens-Land' (seven times), 'Sydney' (three times), 'Neu-Süd-Wales' (twice), Lieutenant James Cook, in connection with our topic (three times) and 'Neuseeland' (four times).

The first article in the *MC* (2, 599-624, 1800) is a large one with a rather distinctive title: "Über eine neuentdeckte Durchfahrt oder Meer-Enge, welche van Diemen's Land von Neu-Holland trennt" (or On the recently-discovered strait between Van Diemen's Land, i.e. Tasmania, and New Holland, i.e. the mainland of Australia). Once again, Zach begins with a comprehensive historical introduction about the discovery of Australia from the time of Pedro Fernandez de Quiros in 1606 onwards, then of van Diemen's Land and the long-held general belief that it was only a peninsula of the mainland. Finally, in 1798 Governor Hunter sent Lt. Flinders and the physician Bass on an expedition and they announced the true nature of Van Diemen's Land. Then Zach returns to the history and sightings made prior to 1798. The most recent statement on this topic was presented in a Letter to the Editor by Sir Joseph Banks, dated 10 February 1802, which appeared in the fifth (April 1802) volume of the *MC* (on pages 356ff). A map of Bass Strait based on information in this letter and in the earlier 1800 article was then published in the May 1802 issue of the *Journal*, and this is included here as Figure 1.

A little piece of political history appeared in the 16th volume of the *MC* in 1807 starting on page 34: an article in the (French) *Moniteur* (No. 42, of the same year) insisted that Cook's discovery of the east coast of

Neu-Holland was based on earlier Portuguese and French efforts. Since Zach had left Thuringia in the summer of 1807, it is unclear whether the inclusion of these pages in the *MC* was due to him or to his disciple and follower, B.A. von Lindenau. The word 'Australien' appears in this article, but is used in context of the old meaning, namely the large mythical Southern land mass.

A unique item is present in the fourth volume of the *MC* (373ff, 1801), namely a letter from the Australian Aborigine, 'Bannolong', to his host in London, written after Bannolong returned to Australia. Although the original letter was in English, a German translation was included in the *MC*. In a footnote, Zach compares the content with the simplicity of the Homeric style.

A long paper dealing with Neu-Holland appears in the 17th volume of the *MC* (pp. 439-463, 1808) and relates primarily to the voyage of M.F. Péron (Paris 1807). The reviewer considers this a continuation of Collins' book (see above), and this connection suggests that Zach was the author. Pages 447 seq. provide information on what was then called Port Jackson, and on its surroundings. Following page 483 an original French map dating to 1802 is reproduced and this is shown here in Figure 2. Note that the observatory mentioned by Collins is not marked.⁵

The geographical determination of a northern and a southern port in Van Diemen's Land by D'Entrecasteaux's expedition is reviewed in the 19th volume of the *MC* (pp. 388 and 394, 1809), and these points are connected with others, e.g. the Cape of Good Hope.

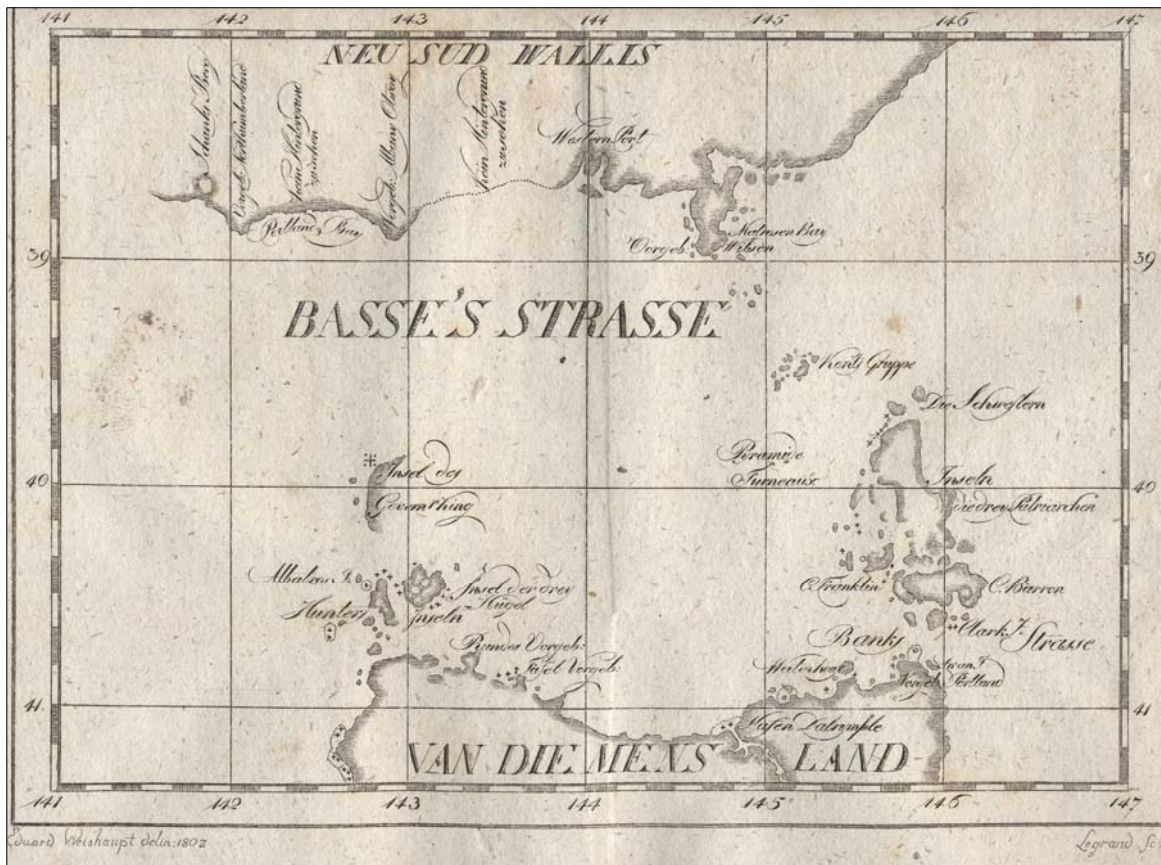


Figure 1: Basse's Straits (after *MC*, 5, 1802)

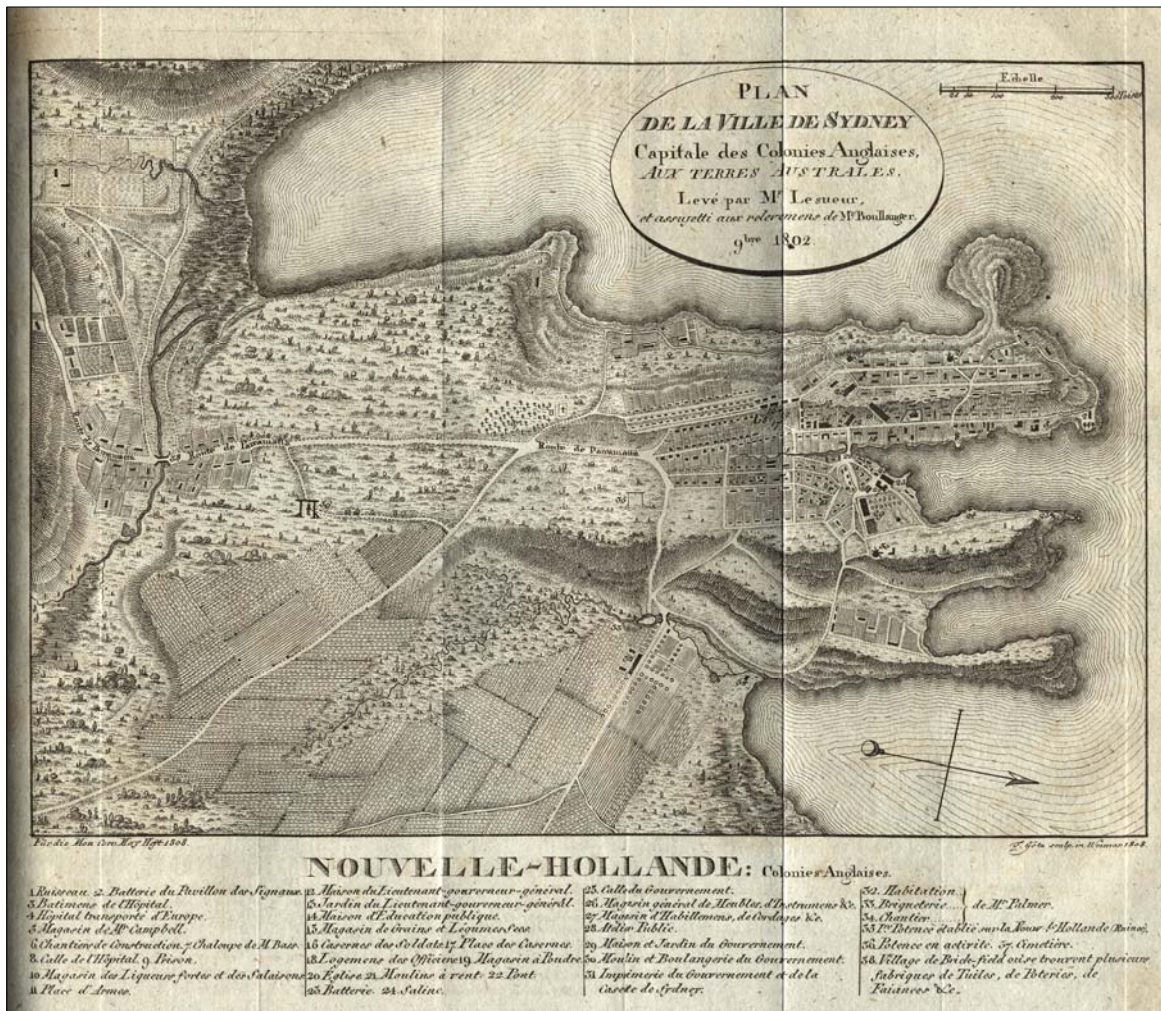


Figure 2: Map of Sydney (after MC, 17, 1809).

Zach was not able to produce a general index for his last journal, the CA, but it is safe to assume that his location at Genoa—one of the busiest ports in the Mediterranean Sea—meant that he was involved in maritime matters, and therefore was in contact with seamen and officers. In this way he would continue to have received news about the ‘Fifth Continent’. One outstanding example of such a navigator was Captain W.H. Smyth (1788–1865), the future Admiral and astronomer, although he seemingly only discussed Mediterranean matters with Zach.

A look into the first and the last complete volumes of the CA confirms this expectation. Already in the first volume (CA 1, 303, 1818), Zach compares reports on deviations of the compass for the islands of Elba and Van Diemen’s Land, and in one of his extensive notes he explains the substitution of the name ‘Australia’ for ‘New Holland’: “Les anglais, qui sont proprement les maîtres dans cette partie du monde ... attachent le nom d’*Australia*, de préférence à la nouvelle Hollande, et îles adjacentes ...”

And the last complete volume of the CA is full of ‘Australiana’. Monsieur Nell de Bréauté⁶ communicates an excerpt of a voyage by two Englishmen (CA 14, 46ff., 1826), while in the same volume Zach reports on Admiral Krusenstern’s analysis of his map

of the Australian coast (which is still ‘Nouvelle-Hollande’), and he also includes some historical information (CA 14, 201ff., 1826). In this same issue of the CA, on pages 305ff. and 418ff., a melange of topics on and around Australia is touched on, including Papua, the Coral Sea, Cook, Flinders, etc. So it is clear that the Fifth Continent and the surrounding region was under regular observation by the old astronomer-journalist and ‘arm-chair discoverer’, who, by the way, had stimulated real long-distance voyagers, not only morally but also by teaching them the astronomical methods of geographical position-finding. Amongst those were A. von Humboldt (by correspondence), Horner and Rüppell.

Kaspar Horner (1774–1834) was one of Zach’s disciples, and was recommended by Zach to Krusenstern when he was seeking an astronomer. Although Krusenstern’s expedition did not go to Australia, we owe to Horner a sketch of a celestial object which has been intensively researched by Australian astronomers: the Large Magellanic Cloud. This was published in the tenth volume of the MC in 1804, and is reproduced here as Figure 3.

Finally, Zach was in contact with C.L.Ch. Rümker (1788–1862), the German astronomer who, after a period in Australia, went back to Europe and finally

obtained a position in Hamburg, thanks to support from an elderly ailing Zach in Paris.⁷



Figure 3: The Milky Way and the Large Magellanic Cloud, as drawn by Horner (after *MC*, 10, 288, 1804). The original caption “Capsche Wolken” is confusing. One might add that Horner reports photometric experiments with attenuation glasses on the Milky Way and the Magellanic Clouds (same volume, p. 220).

3 DISCUSSION AND CONCLUDING REMARKS

Above are a few examples of Australian material presented to an international audience in languages other than English. The journals in which the articles appeared were produced by a Hungarian-born astronomer in German, and later in French while he was domiciled at an Italian seaport. I cannot say if these journals contained real news for Australians, but at least they carried information that was of general interest to those in the Non-Anglo-Saxon world.

As far as Zach himself is concerned, he did not conceal his general opinion on Australia and its future:

A new and big step in the knowledge of our globe in a continent has been made, which will very likely bear consequences for latter generations; these expectations are the more founded because of the rapid progress in the English settlement at Botany Bay ... *Themis* and *Urania*, *Thalia* and *Melpomene* have erected their thrones in this place already. (Translated into English,

the original German text appeared in the second volume of the *MC*, 617E, 1800).

4 NOTES:

1. *Allgemeine Geographische Ephemeriden*. Weimar, at Bertuch; two volumes per year; Volume 1 (1798) to Volume 4 (1799) were edited by F. von Zach.
2. *Monatliche Correspondenz zur Beförderung der Erd- und Himmelskunde*. Gotha at Becker; two volumes per year; Volume 1 (1800) to Volume 28 (1813) edited by F. von Zach.
3. *Correspondance Astronomique, Géographique, Hydrographique et Statistique du Baron de Zach*. Gènes chez A. Ponthenier; two volumes per year except for Volumes 1, 4, and 15; Volume 1 (1818) to Volume 15 (1826).
4. This is the well-documented Dawes Observatory which was located on the present-day site of the southern pylon of the Sydney Harbour Bridge (see, e.g. Laurie, 1988; McAfee, 1981; Orchiston, 1989).
5. This is hardly surprising in that the Observatory was abandoned in 1791 when Dawes returned to England.
6. This gentleman was really a man, even though his Christian names were Éléonore Suzanne—a case of ‘gender mainstreaming’ avant la lettre?
7. On 15 February 1831 Zach wrote a letter to Olbers asking him to support Rumker (this is the English spelling used by Zach) in Hamburg (Brosche, 1990), but in fact the full story is much more complex (see Schramm, 1996: 92-110).

5 ACKNOWLEDGEMENTS

I wish to thank Hilmar Duerbeck and Wayne Orchiston for providing comments on earlier drafts of this paper.

6 REFERENCES

- Brosche, P., 1990. Konjunktionen. Briefe Franz Xaver von Zachs. *Mitteilungen Gauß-Gesellschaft*, 27, 3-27.
- Brosche, P. (ed.), 1998. *Astronomie der Goethezeit = Ostwalds Klassiker 280. Second Edition*. Thun, Harri Deutsch Verlag.
- Brosche, P., 2001. *Der Astronom der Herzogin*. Frankfurt, Harri Deutsch Verlag.
- Laurie, P.S., 1988. William Dawes, and Australia’s first observatory. *Quarterly Journal of the Royal Astronomical Society*, 29, 469-482.
- McAfee, R.J., 1981. *Dawes’s Meteorological Journal*. Canberra, Australian Government Publishing Service (Bureau of Meteorology Historical Note No 2).
- Orchiston, W., 1989. William Dawes: Australia’s first meteorologist. *Quarterly Journal of the Royal Astronomical Society*, 30, 359-360.
- Schramm, J., 1996. *Sterne über Hamburg*. Hamburg, Kultur- und Geschichtskontor.
- Zach, F. von, 1798. Letter to Father David, dated 18 February 1798. In Seydl, O. 1938. Briefe Franz Xaver Freiherrn von Zachs ... *Publications de l’Observatoire National de Prague*, 11.

Dr Peter Brosche is Professor of Astronomy (retired) at the University of Bonn. His main research fields are visual double stars, astrometry, rotation of the earth and global properties of galaxies. Historically, he focusses on the period between 1750 and 1830. Up to now, he served as Chairman of the History of Astronomy Working Group of the Astronomische Gesellschaft.