The NCB is retracing the paths of explorers in an innovative online project.

Explorers are among the most frequently searched entries in the ADB. Maps of their routes are among the most frequently requested maps in national and state libraries. Why not, we thought, add copies of the maps — and the text of explorers’ journals — to our websites as a resource? With the maps overlaid on Google Earth, readers could follow the journey, zoom in and out to get a better look at the terrain, and understand a bit more about what was being described in the explorers’ journals.

We chose Ludwig Leichhardt’s overland expedition from Moreton Bay, Queensland, to Port Essington, Northern Territory, in 1844-45, a journey of over 3,000 miles and 443 days, for our pilot project to test the feasibility of our idea. This trip, by the unlucky Leichhardt, is well-documented, with four of the seven expeditioners writing accounts of their experiences. We are making all of the journals available on the web and are linking journal entries to expedition campsite locations on the map. This allows users to read the entries and, at the same time, examine the current terrain to provide context for the journal entries. An entry for any particular day can also be shown on the screen alongside the same day’s entry of another expeditioner. It is interesting to compare the men’s different reactions to events and their different concerns. Not unexpectedly the journal kept by 15-year-old John Murphy is the least introspective. His main interest seems to have been keeping a count of the birds and animals slain each day for food and as specimens. The journals also reveal the many internal tensions among the expeditioners. Being able to quickly move between them means that the viewpoints of all participants can be better understood.

The expeditioners documented many aspects of their journey. The terrain, flora and fauna is obviously a prominent part of the narrative, with new species often being discovered and documented by Leichhardt and the naturalist, John Gilbert.

Wrote Leichhardt on 11 October 1844:
“we passed several nests of the brush-turkey (Talegalla Lathami, Gould). Charley [their Aboriginal guide] got a probably new species of bandicoot, with longer ears than the common one, and with white paws. We distinguished, during the rain, three different frogs, which made a very inharmonious concert. The succinea-like shells were very abundant in the moist grass; and a limnaea in the lagoon seemed to me to be a species different from those I had observed in the Moreton Bay district”.

Periodic issues with their bullocks (“restless brutes”) are another major topic of comment in the journals. The expedition nearly faltered right at the start after the bullocks that carried their luggage rebelled against their inexperienced handlers, causing the loss of 143 pounds of flour, John Gilbert’s tent, and damage to his gun (Leichhardt, 11 Oct 1844). An ‘understanding’ between the bullocks and expeditioners was eventually reached. Some bullocks, particularly Redmond, became much loved members of the party. At one stage near the journey’s end the weary expeditioners were prepared to starve for a few days rather than make the decision to kill Redmond (“our good companion”) for food. (11 Dec 1845).

The journals kept by the expeditioners contain a wealth of information and are being increasingly studied by botanists,
EXPLORING AUSTRALIA (cont'd)

GIS analyst, Lauren Carter, is drawing a digital version of Leichhardt's map. She is shown with her tools of trade, including Glen McLaren's three volumes of field notes (bottom right hand corner). She estimates it will take her 170 hours to draw the map.

zoologists, anthropologists and others interested in documenting environmental changes since white settlement and learning more about first contact with Aborigines. We hope that, by making the journals available online, in a way that better engages users than a simple ebook format can, more people will take an interest in the great exploration trips of Australia.

The first step in the project was to digitise Leichhardt's map of exploration. Digitising a map is not the same as scanning it. Scans are merely images and have limited flexibility in how they can be used. They cannot, for example, be easily overlaid on visualisation tools such as Google maps. We were hoping to get away with ‘pinning’ a copy of the Leichhardt map, drawn by the great English mapmaker, John Arrowsmith, in 1847, over a Google Earth map so that we could simply redraw the route by referencing common points. Though it was of superb quality at the time of production, Arrowsmith's map has many inaccuracies. It does not show the correct outline of Australia, or the course of rivers (they had not been accurately plotted at the time) and, as Leichhardt was the first European to traverse this route, there are no towns or other sites on it to use as reference points. There has also been a change in the ways maps compensate for the spherical shape of the world.

In the end there was no way around it. If we wanted to create an accurate map of Leichhardt's route from Moreton Bay to Port Essington we would have to start from scratch and redraw the whole map. Lauren Carter, a GIS analyst at the ANU, has taken on this task. Though topographical maps and GIS (Geographical Information System) software make the job easier than it was in 1847, Lauren, just as Arrowsmith did, has had to pore over Leichhardt's journal and field notes, in an attempt to pinpoint not only where he set up camp each night but the routes he took between campsites. The latter is, perhaps, the hardest part of the exercise as Leichhardt often said that they crossed a river at the bend (which bend?) — or that they crossed some fine flats but gave no co-ordinates. Lauren uses the GIS to pinpoint the most likely place for him to have crossed the river or the fine flats. She also has to take into account that some rivers have changed their course since the 1840s, while others (such as the Burdekin) have been dammed (some of Leichhardt's campsites are now under water). Careful attention, and a good dose of common sense, are necessary for drawing the map. It will never be possible to accurately re-create Leichhardt's route but Lauren’s map will be the most accurate produced so far.

Her task has been made much easier by Glen McLaren’s work, in the 1990s, on Leichhardt’s expedition. As part of his PhD thesis, Glen traversed — on foot, horse, and in a helicopter – Leichhardt’s route, checking the accuracy of the co-ordinates of campsites that were given by Leichhardt (Leichhardt’s navigation equipment was basic and did not give the kind of accurate readings that can be achieved today) and trying to work out the routes taken between campsites. His findings were published in Beyond Leichhardt: Bushcraft and the Exploration of Australia (1996). Glen also compiled three volumes of his own field notes which he has generously lent to the project. These have proved to be an invaluable aid and will ensure that the map being drawn by Lauren is as accurate as possible. Glen has also generously given us permission to add his field notes to Exploring Australia as a resource. He often discusses what the landscape is like now compared to what Leichhardt described so his field notes are invaluable in that regard as well.

While Lauren has been drawing the map, the NCB’s computer programmer, Scott Yeadon, has been developing the code to enable the interaction between the journals and the map, as well as the integration of the map and journals with the NCB’s websites so that, for example, those looking at Leichhardt’s ADB entry can click on a link to read his journal and view the map.

Those wishing to see the progress of the project so far can do so at http://oa.anu.edu.au/entity/8843 N.B. The site is still a work in progress. We don’t yet have all the campsites or...
routes marked and the explorers’ journals need to be corrected for OCRing errors. We plan to add further value by including annotations in the journals so that, for example, people can click on the name of a person mentioned in a journal entry and go to their ADB entry. This value-adding should be of particular benefit to school students. We also aim to include thematic essays about the exploration of Australia in general, the contact (on most occasions for the first time) between explorers and Aborigines, and essays discussing environmental changes since white settlement.

It is anticipated that the ‘new’ map of Leichhardt’s exploration to Port Essington will be finished in February. As well as making the map available on the web we will be producing a hard copy version which will include highlights from the journals as well as illustrations of some of the flora and fauna discovered. Somewhere in the map there will also be an image of a pack bullock, in honour of Redmond, the only one of the 16 bulls who began the 3,000 mile trek from Moreton Bay to make it to Port Essington.

This project was undertaken as a pilot to see, firstly, if it could be done (we have shown it can), and what resources it would entail. The next stage will involve us in discussions with national and state libraries, as well as the Australian and New Zealand Map Society, about how we might go about securing funding so that we can work together to create a resource which covers all the great journeys of exploration across Australia.

Our special thanks go to Dr Martin Woods, curator of maps at the National Library of Australia, for his encouragement and assistance in getting us started on the project and for suggesting Leichhardt for our pilot study.

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