

white mouthless figures ended with the arrival of Rev. James R. B. Love at Port George IV Mission in 1914. He was informed they were *Wonjuna*, important deities of the Aboriginal people, or as he described them, 'an invisible, benevolent and creating god' (1917: 37).

The Kimberley Exploring Expedition marks the end of the 'classical' age of Kimberley exploration. The blank territory between Cambridge Gulf and Napier Broome Bay on Brockman's 1902 map was filled in and two important new rivers found and named. Land between Wyndham and the Drysdale River was opened up for cattle grazing in 1914 and the Forrest River Mission was established in 1913, the founding party guided by Lachlan McKinnon Burns who tragically drowned there. Investigation into Aboriginal rock art was put on a firm footing with the work of Rev. Love. Unfortunately the practice of creating ground figures seems to have stopped with the establishment of the Forrest River Mission.

Over one hundred newspaper articles were published on the expedition but no definitive work was produced by Conigrave at the time. This was the case until the 1930s when the loss of the seaplane *Atlantis* on the Kimberley coast renewed interest in the area and Conigrave responded with a magazine article (1932) and then in 1938 an autobiographical book of his travels.

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Acknowledgments

Thank you to Dr Mike Donaldson for undertaking library research in Perth on my behalf; Kim Akerman for supplying two photographs; Dr Philip Jones and Alice Beale of the South Australia Museum; Donna Newton of the Royal Australian Historical Society; Andrew Barker of Kununurra Historical Society; Battye Library and State Record Office, Perth; Dr David Welch, Joc Schmiechen, Bob Jones; Prof. Margarita Diaz-Andreu.

REFERENCES

- Anon. 1911. The Conigrave scientific expedition. *Western Mail* 7 October, p. 25.
- BROCKMAN, F. S. 1902. *Report on exploration of north-west Kimberley, 1901. Report to Minister for Lands, Western Australia*, Government Printer, Perth.
- CARRINGTON, F. 1890. The rivers of the Northern Territory of South Australia. *Proceedings of the Royal Geographical Society of Australasia, South Australia Branch* 2: 56–76.
- CONIGRAVE, C. P. 1913. Northern Aborigines. Nomads of the bush. Their life and art. *The Argus* 15 February, p. 7.
- CONIGRAVE, C. P. 1932. North Australian trails. *The New Nation Magazine* 1 September, p. 31–41.
- CONIGRAVE, C. P. 1938. *Walkabout*. J. M. Dent & Sons Ltd, London.
- D'EMO, N. n.d. *Iconimico etografico Aboriginal*. Album of

paintings found in the natural museums or caves of rocks in the forest of the wild Aborigines of the N.E. of Western Australia. Unpubl. report.

- GREY, G. 1841. *Journals of two expeditions of discovery in north-west and Western Australia during the years 1837, 38 and 39*. T. & W. Boone, London.
- KEEN, I. 1977. Yolngu sand sculptures in context. In P. J. Ucko (ed.), *Form in indigenous art: schematisation in the art of Aboriginal Australia and prehistoric Europe*, pp. 165–183. AIAS, Canberra.
- LOVE, J. R. B. 1917. Notes on the Wororra tribe of north-western Australia. *Royal Society of South Australia, Transactions* 41: 21–38.
- MOUNTFORD, C. P. 1937. Examples of Aboriginal art from Napier Broome Bay and Parry Harbour, north-western Australia. *Royal Society of South Australia, Transactions* 61: 30–40.
- PEREZ, E. 1977. *Kalumburu. The Benedictine Mission and the Aborigines 1908–1975*. Kalumburu Benedictine Mission, Kalumburu W.A.
- SCHMIECHEN, H. J. 1993. Shadows in stone. A report on Aboriginal rock art survey expeditions 1988 and 1991. Drysdale River National Park, Kimberley, Western Australia. Unpubl. report, Adelaide.

RAR 33-1190

Free image-enhancement apps for iPad (LabStretch) and iPhone (LabStretch2)

By ROBERT MARK and EVELYN BILLO

Tools for image enhancement are widely available for computers. These include Photoshop (Mark and Billo 2002) and DStretch (Harmon 2008). These techniques are fundamentally based upon histogram-stretching in various colour spaces. We recognised the need for image-enhancement in the field, with devices commonly available. As a step in this direction, we have developed iOS apps to do stretching in the Lab colour space. Lab separates the pixel luminosity from the colour information, which is encoded in two orthogonal colour channels. These are then separately stretched by adjusting sliders. Figure 1 is a screenshot of the iPad app showing the sliders and the before/after images. Figure 2 shows the process for using LabStretch.

The apps are available, for free, from Apple iTunes. Links for download, as well as instructions, are available at <http://www.rupestrian.com/labstretch.html>.

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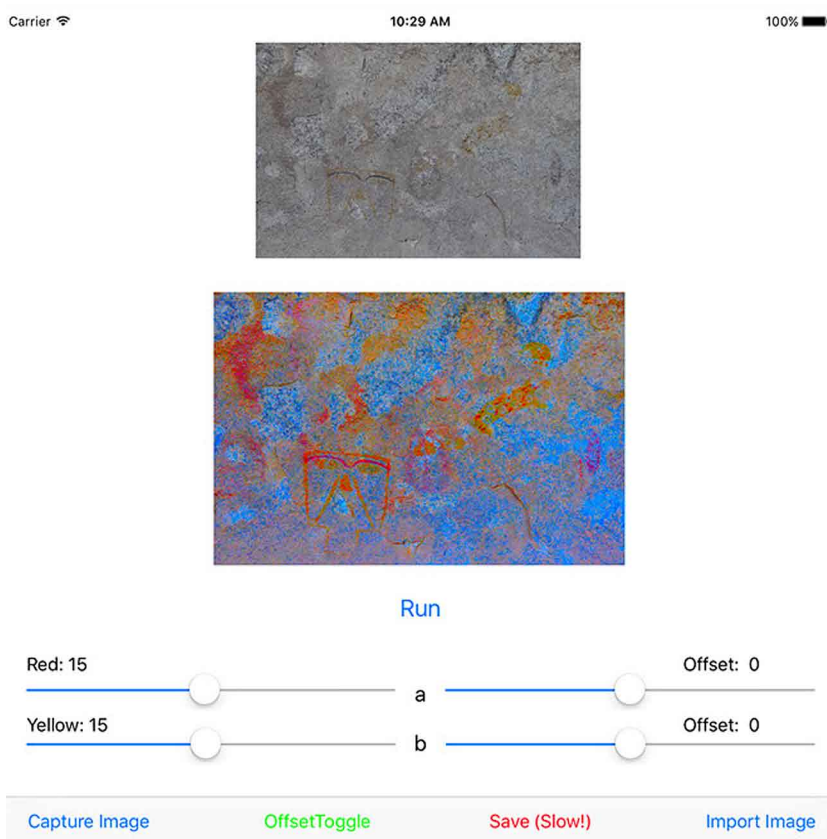


Figure 1. LabStretch iPad screenshot. LabStretch2 (iPhone) uses two screens (*Settings* and *Image*).

REFERENCES

- HARMON, J. 2008. Using decorrelation stretch to enhance rock art images. <http://www.dstretch.com/AlgorithmDescription.html>.
- MARK, R. and E. BILLO 2002. Application of digital image enhancement in rock art recording. *American Indian Rock Art* 28: 121–128; <http://www.rupestrian.com/Enhancement.pdf>.

3. You can use the iPad screen capture to save results.
4. Use **Save** to capture the full resolution-enhanced image to the camera roll. This requires considerable calculations and, depending upon your CPU speed, can take a minute or more.

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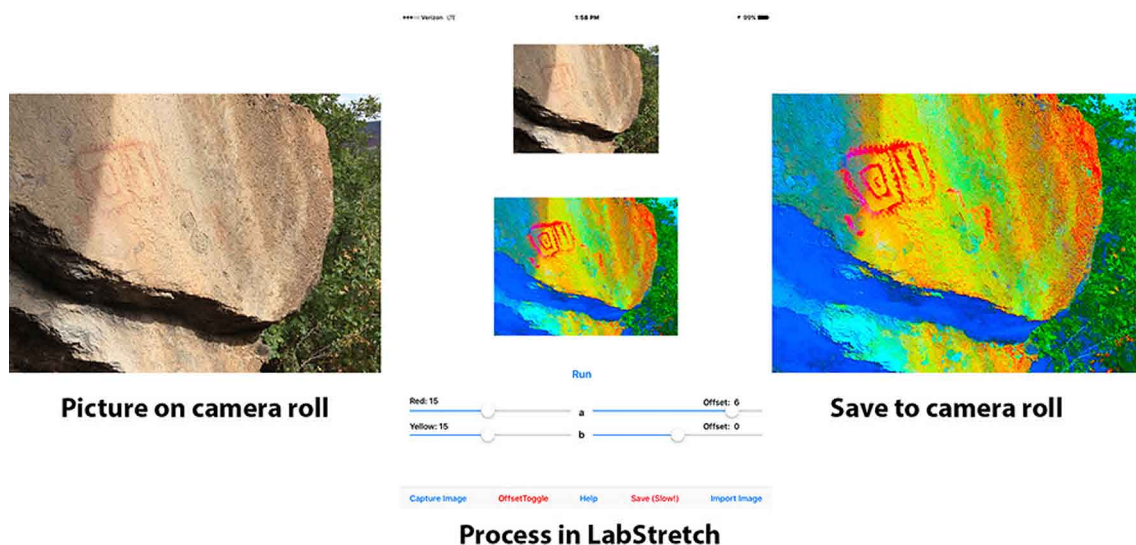


Figure 2. Process for using LabStretch: 1. import image from camera roll, or acquire it within the app. 2. Make adjustments in LabStretch. 3. Save adjusted image to camera roll.