

APPENDIX C

CLEANING STAINS ON HISTORIC STONE MASONRY

The Secretary of the Interior's Standards for Rehabilitation require that, "The surface cleaning of structures... shall be undertaken using the gentlest means possible."¹ The limestone on many of the structures on Boca Chita Key has been stained by the corrosion of iron used in the concrete construction. This appendix outlines a poultice treatment recommended for removing iron stains from limestone. Further information about mixing and using poultices to clean masonry is available in *Practical Building Conservation—Volume I, Stone Masonry* by John Ashurst and Nicola Ashurst, and *Keeping It Clean: Removing Exterior Dirt, Paint, Stains and Graffiti from Historic Masonry Buildings* by Anne E. Grimmer.

Recipe for cleaning iron stains from limestone:

Before cleaning, test the poultice on a small, unobtrusive section of the masonry to determine whether there will be any unwanted effects on the stone.

- 1) Make a mixture of 7 parts glycerine, 1 part sodium citrate, and 6 parts warm water.
- 2) Add attapulgitic clay to the solution until a smooth paste is formed.
- 3) Apply the paste to the stained surface and leave until dry.
- 4) Remove the paste with a wooden or other non-metallic spatula.
- 5) Repeat (3) and (1) as often as required to lift or satisfactorily lighten the stain.

For very stubborn stains:

- 1) Wet the surface with a solution of 1 part sodium citrate and 6 parts water.
- 2) Apply an attapulgitic wet pack containing sodium hydrosulphite (sodium dithionite).
- 3) Lift off and follow by washing with copious amounts of clean water.

Note: Some success has been achieved using an amine complex of hydrocarboxylic acid in aqueous solution.² Ammonium oxalate has also been suggested as a substitute for the sodium

¹U.S. Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings* (Washington: U.S. Department of the Interior, 1992), vii.

²John Ashurst and Nicola Ashurst, *Practical Building Conservation—Volume 1, Stone Masonry*, English Heritage Technical Handbook (New York: Halsted Press, 1988), 62. The same recipe is given in John Ashurst

citrate and glycerine. Suggestions for other materials with which to replace attapulgite can be found in the National Park Service publication *Keeping It Clean*.³

and Francis G. Dimes, *Conservation of Building and Decorative Stone*, vol. 2 (London: Butterworth-Heinemann, 1989), 135.

³Anne E. Grimmer, *Keeping It Clean: Removing Exterior Dirt, Paint, Stains and Graffiti from Historic Masonry Buildings* (Washington: U.S. Department of the Interior, National Park Service, Preservation Assistance Division, Technical Preservation Services, 1987), 31, 20-21.