

quotation on the back cover says, “the best history of Central America and Nicaragua ever written,” is less clear. But why should a poem be that, anyway?

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*Convocatoria al poder del número: censos y estadísticas de la Nueva Granada, 1750–1830.* By HERMES TOVAR PINZÓN, CAMILO TOVAR M., and JORGE TOVAR M. Bogotá: Archivo General de la Nación, 1994. Maps. Tables. Index. 587 pp. Paper.

Hermes Tovar Pinzón and sons Camilo and Jorge have produced this handsome volume of New Granada’s (mainly Colombia’s) earliest censuses. This family enterprise gives new meaning to family history. It also initiates a new series by Colombia’s Archivo General de la Nación dedicated to publishing primary sources on the history of Colombia. Hermes Tovar is that country’s leading historian of the colonial period. He has long sought to locate, edit, and publish the primary sources necessary for the writing of Colombia’s demographic, social, economic, and ethnohistory.

*Convocatoria* opens with a long essay on the demographic questions to be asked of Colombia’s colonial past. Arguing for the existence of a large number of Indians on the eve of the conquest, the Tovars leap into demographic outer space with an estimate of 8,254,264 (p. 22). The work then presents the only general census ever done before independence (1778) and the first one of the republican era (1825). The so-called 1778 census really dribbled into Bogotá piecemeal between 1777 and 1779 from the various regions of Colombia and Ecuador, but apparently not from Venezuela, because no returns from that area are shown. The 1825 census does include all the regions in the Viceroyalty of New Granada and Gran Colombia. The Tovars have used these two general censuses as bookends for the often more detailed recounts that were sometimes done in individual provinces in the late colonial and early republican eras. The Tovars have brought these censuses together under appropriate regional headings. Antioquia’s are particularly rich, especially from the years 1825 to 1833.

The censuses are scattered through archives and libraries in Colombia, Spain, and Great Britain, seemingly without rhyme or reason; as a result, most have never been published. Even those of 1778 and 1825 were difficult to obtain and replete with errors. To gather them all together in one volume is a magnificent achievement. The Tovars have made the necessary corrections, added the marginal and endnotes of the originals, and clarified some of the statistical errors of the census takers. There are no shortcuts here. Rigorous editing, fidelity to the documents, and complete citations are the mark of the Tovars’ scholarship. They have also supplied totals and calculated percentages that were not in the originals.

The Tovars argue that other censuses are still to be found and more work is to be done with what is now published. One task is to rearrange the regions along more modern political boundaries, so that later censuses can be compared. Another is to impose more specificity as to what towns and pueblos belonged to individual regions.

Work in parish archives would also undoubtedly elucidate the larger meaning behind the numbers.

What the Tovars publish is always stimulating. This volume is no exception.

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*Francisco José de Caldas: A Scientist at Work in Nueva Granada.* By JOHN WILTON APPEL. Philadelphia: American Philosophical Society, 1994. Maps. Appendixes. Notes. Bibliography. Index. 154 pp. Paper. \$20.00.

The scientific work of Francisco José de Caldas (1768–1816) reveals itself in this book as an enterprise made difficult by the lack of educational resources in colonial America and the scarce contact with the latest knowledge available in Europe at the time.

In sections 1 and 2, John Wilton Appel describes Caldas' early career and his initiation into the scientific adventure through the teachings of José Celestino Mutis. Three factors were fundamental in Caldas' development during the period 1796–1802: the French expedition to America to measure the shape of the earth, undertaken in 1735 by the Paris Academy of Sciences and directed by Charles Marie de la Condamine; the Royal Botanical Expedition to New Granada, under Mutis' guidance; and the visit of the eminent naturalist Alexander von Humboldt, accompanied by the French botanist Aimé Bonpland.

Appel recounts Caldas' continuous devotion to scientific research; Caldas arrived at the discovery of the hypsometric principle even when settled in the isolated life of provincial Popayán. When his dream of traveling with Humboldt and Bonpland did not come true, Caldas accepted Mutis' proposal to become a member of the botanical expedition, completing a herbarium of the most effective species of cinchona and working on phytogeography. Appel contends that Caldas did not turn seriously to the study of plant life until his encounter with Humboldt and Bonpland, and that he found a scientific community when he began working with Mutis.

Sections 3 and 4 describe Caldas' great work on the construction of the first astronomical observatory in Spanish America, in Santa Fe de Bogotá. His post as its director allowed him both to undertake a meteorological program and to organize the vast amount of data and the plant collections he had accumulated during his fieldwork in Ecuador. Utilizing the prestige of the position, he established a weekly scientific periodical, *El Semanario del Nuevo Reino de Granada*.

Caldas' intellectual endeavors were abruptly shattered by the call for independence from Spain, and he took arms with revolutionary fervor, even though during this time he tried to keep the *Semanario* alive. He was imprisoned and then executed in 1816. With his death disappeared a constant supporter of science.

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