Geological Society of America

Structural Geology & Tectonics Division

2013
Outstanding Publication Award

Presented to Jim Hibbard, Cees van Staal, Doug Rankin, and Hank Williams

Hibbard, J.P., van Staal, C.R., Rankin, D.W., & Williams, H. (2006) *Lithotectonic Map of the Appalachian Orogen, Canada-United States of America*. Geological Survey of Canada, "A" Series Map 2096A, 2 sheets (1:1,500,000), doi: 10.4095/221912.

Citation by Allen Dennis

It is a pleasure and an honor to be the citationist for Jim, Cees, Doug, and Hank's Lithotectonic Map of the Appalachian Orogen, Canada-United States of America for the Geological Society of America Structure and Tectonics Division Outstanding Publication Award for 2013.

Hibbard, van Staal, Rankin and Williams' 2006 "AppMap" is outstanding because not only does it synthesize all published and many unpublished maps up to its publication date, it brings to together the best geochronology, the most current interpretations, and is published in a form that can be refined and modified easily in the future. This map is descended from Hank Williams' famous 1978 Tectonic Lithofacies Map of the Appalachian Orogen – which remains an great teaching tool, and the new map extends those efforts into a research tool today. In the past six years it has had a terrific impact – it is the single most powerful integrative tool in the Appalachians to be published in the past 35 years. Particularly with the recognition and documentation of large strike slip displacements in the Appalachians over the past 25 years, a single detailed source that covers the length of the orogeny is absolutely necessary for Appalachian workers in tectonics and structure.

The best place to begin with this map is the explanation. For at least three years prior to publication Jim Hibbard and his coworkers went from Northeastern, Southeastern to Annual Meetings of the GSA to GAC-MACs as well as regional thematic meetings presenting draft copies of the map explanation for comment and review to be sure that all workers had a chance to put in their two cents on the interpretation of rocks they may have worked on and to be sure that the map compilers caught all the data they could for this new AppMap.

This has resulted in a fine interpretive map explanation with many examples of formations and groups that illustrate the features that are shown on the map. You might not agree with every interpretation presented here, but it is so well documented, and the authors have drawn on the wisdom of the community completely.

Hibbard, van Staal, Rankin and Williams solicited many regional experts in the mapping of different areas (about two dozen Primary Geologic Contributors [full disclosure: I was one.]) to provide detailed mapping and their own explanation and keys. Again part of the strength of the 2006 AppMap is that while the map represents a single integrated vision it has drawn on the

efforts of so many people. Jim, Cees, Doug, and Hank serendipitously (or not) created this synthesis at an instant when access to high precision radiometric dating became inexpensive and nearly widespread. While these authors participated in many of these dating campaigns, again they drew on the efforts of others to make this contribution complete.

Finally, the map is available as a pdf, jpg2000, and as a collection of Arc/GIS shape files, in addition to paper. The pdf version is amenable to revision by individual workers using Adobe illustrator. The inclusion of the GIS shape files permits a single research lab to use the new 2006 AppMap as an integrative base for all co-investigators and students working on a variety of projects. This is a considerable community service that the authors have provided.

In conclusion, sometimes there is a tension between regional geology and "process-oriented" studies. The 2006 Lithotectonic Map of the Appalachian Orogen bridges that divide. The map these authors have produced, by virtue of its detailed observations, and the comprehensive orogenic and

temporal scales over which those observations are integrated yields insights about the behavior of the Paleozoic crust and evolution of the Appalachian Wilson cycle. Their map will continue to stimulate research questions in the our community in coming years.

Please join me in recognizing Drs Hibbard, van Staal, Rankin and Williams' contribution.

The publication may be downloaded gratis at:

https://geoscan.nrcan.gc.ca/starweb/geoscan/servlet.starweb?path=geoscan/downloade.web&search1=R=221912

Response by Jim Hibbard

First, we thank Allen for both nominating and citing our Appalachian map for this award. We are also grateful to the SG & T awards committee for selecting our map this year.

In the words of Mortimer Snerd, 'Who'd a thunk it?' We were surprised to receive recognition for doing something that we find both enjoyable and gratifying, no less with the team of our choice. It was an honor and a pleasure for me to be able to complete this project with the likes of Cees, Doug, and Hank. We meshed gears much much more than we grinded gears.

Compilations, by their very nature, involve a multitude of people - the lithotectonic map involved input from the Geological Survey of Canada, the National Science Foundation, and the United States Geological Survey, as well as from academia and industry. We attempted to acknowledge them all on the map. However there are a few people who deserve special attention, for without their efforts, there would have been no map. I'll refrain from going back to Mom, Dad, the doctor who delivered me, etc. and cite four people who had direct impact on the map. First, we thank Tom Wright, former director of Tectonics at the National Science Foundation. Rather than dispel our unorthodox proposal, Tom encouraged it and let the tectonics community decide if it was fundable. Tom and the community both firmly agreed to fund the project. We also appreciate the efforts of Art Goldstein, another former director of Tectonics at

NSF, for his efforts in helping fund the production stage of the map. We are grateful to Mike Sigouin, production coordinator for the Cartographic Services Section of the Geological Survey of Canada for his good-natured care and concern in shepherding the map through the production stages. Last, but not least, we are grateful to Eleanor Everett for digitizing a yeoman's share of the map.

We all enjoy feedback on our endeavors – and believe me, we received some very interesting feedback on the lithotectonic map. Perhaps we can provide examples over a beer in a few minutes. However, receiving this recognition from the community is the most meaningful, heartening, and memorable feedback that we could hope to receive.

Thank you all.

Response by Cees van Staal

There is not much more to add to Jim's words. However, I would like to make two additional comments: 1. it is wonderful to see that that the structural/tectonic community appreciate our Appalachian map, because in general, maps are the way in which geologists communicate best. Especially lithotectonic maps of mountain belts serve as the basis for, and are the dynamic force behind the analysis of tectonic processes responsible for orogenesis, However, they are a transient product, dependent on the knowledge of the day; a point not always well appreciated and/or understood by the management of the organizations that produced them. 2. Any group that works together on a single, complicated product such as a tectonic map that covers parts of more than one country, needs a leader that makes the final decision when there is dissent and hence, keeps all members on track; Jim Hibbard carried out this job in exemplary fashion.

Response by Doug Rankin

This has been the most challenging and satisfying project I have ever been involved in. It has also been one of the most frustrating. Our map, for better or worse, portrays the whole Appalachian orogen with 39 units. Once the units are agreed upon, which was an evolving process, one has to fill the space. There can be no dangling contacts or empty spaces. Anyone who has ever been involved in a map compilation can appreciate that challenge and the frustration that goes with it.

I cherish the memory of the discussions, some spirited, and the camaraderie with my co-authors that resulted in the successful completion of the lithotectonic map under Jim Hibbard's quiet guidance. I, like my co-authors, am grateful to the SG&T community for recognizing our map with this award.