February 8, 2024

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Senator Smith, Representative Jones and members of the committee

Good afternoon. I am Professor emeritus Robert Gastaldo who served as the Chair in the Department of Geology at Colby College for 13 years, having joined the faculty in 1999 and recently moved from the classroom to "active" retired status in 2020. Prior to my appointment in Maine, I was a Distinguished Professor of Geology at Auburn University, Alabama, beginning my career there in 1978. I am a Fellow of the Geological Society of America and the Paleontological Society, a Gilbert H. Cady Awardee of the Geological Society of America and a Ralph J. Gray Awardee of The Society of Organic Petrology. I have been granted two Fulbright Fellowships and I am a Forschungspreisträger awarded by the Alexander von Humbodt Stiftung in Bonn, Germany. In the mid-1990s, I was the writer and consultant for the American Geological Institute's Middle School Geoscience curriculum–Investigating Earth Systems–and was responsible for the Fossil module that includes evolution. Thereafter, I led a writing/development team for AGI's High School curriculum–EarthComm–where our work resulted in the first edition's Earth Systems Science chapter. Once again, the topic of evolution plays a critical role in that curriculum.

In 2018 when Maine first proposed the adoption of a standards-based science curriculum, I sent my comments to the committee (27 February 2018) and followed its subsequent development. I was asked to join the current review committee to evaluate the 2023 document last April by Beth Lambert, Acting Chief Innovation Officer and Director of Innovative Teaching and Learning. Due to medical issues that emerged just prior to the 19 May meeting, I was unable to attend the working session in person, and remote participation was not possible. On 16 May I sent the following text in an email indicating that "I had looked forward to assisting the committee and Department of Education in this important and critical review, and am disappointed that I will not meet you folks and the rest of the members this week." That was the last communication I had with the committee.

In the email correspondence prior to the May meeting, and based on the external letters sent to the committee, the consensus was to give the new standards a better chance at being implemented due to its disruption as a consequence of the pandemic. In the revised standards circulated to the committee for discussion on 19 May (Science standards rev.2018.docx), neither MS-LS4-2 nor MS-LS4-4 contained any text referencing "evolutionary mechanisms and eugenics" which would have raised a red flag and my opposition to the inclusion of this language at the time. Due to the fact that I never received any minutes of the review committee's meeting, nor received any updated set of science standards following that meeting when changes were made to the text last summer, I was blind sided when I learned that these suggested examples were being provided to Middle School teachers about science and scientific inquiry. Being a committee member and not having been informed of any revisions, or having these posted online for review after changes were made, I am opposed to their inclusion in the document for several reasons.

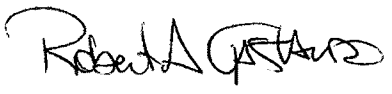
A cognitive disconnect exists in a number of partisan groups in Maine and the country, at large with respect to evolution beginning with the 1925 Scopes Trial in Dayton, Tennessee. Yes, children and their parents love fossils and dinosaurs, and are fascinated when new and unusual

organisms are discovered (e.g., the viral media coverage my colleagues and I received last week in the New York Times, The Wall Street Journal, Newsweek, CNN, and many other outlets about a 350 million-year-old, Dr. Seuss-like tree from Canada). The general public understands, at a fundamental level, that these organisms lived in the deep past and do not exist in today's world. Yet, there is an uproar from a minority of parents when the concept of evolution is introduced into the educational curricula of many of our schools as the scientific concept that explains their presence on Earth. Over the past few decades, attempts have been made to subvert and distort science and scientific findings for political and religious agendas. This is particularly true with respect to the theory of evolution. The text that now appears in MS-LS4-2 and MS-LS4-4 as examples of what the concept of evolution has done by society plants the seed-of-doubt about the discipline into Middle School students. The concept of evolution is not, nor has it been, the reason for man's transgressions against man. That lesson belongs in history, sociology, and psychology curricula; it doesn't belong is a science curriculum. Nor do such claims belong in a science curriculum that mislead the discussion. Scientists have no doubts about evolutionary theory.

In the early 1980s, the educational system in Alabama was targeted by citizens groups lobbying for the inclusion of Creationism into a "fair-and-balanced" science curriculum that should be adopted across the state. I testified at the time ***against*** the inclusion of religious concepts into any science curriculum, organized the first symposium on The Evolution–Creation Controversy for the 1984 Southeast Section GSA meetings, and revisited the issue when Creationists morphed into Intelligent Design advocates more than 2 decades ago. All of these alternative proposals were rejected because they have no scientific basis and do not belong in any science curriculum. In fact, Pennsylvania's ruling in the 2005 Kitzmiller v. Dover Area School District case made that perfectly clear. Adopting these proposed revisions to Maine's science standards will make the document as benighted as what Alabama attempted to do more than 40 years ago.

Creationists have long advanced such claims about "evolution and eugenics" and their incorporation into Maine's document invites teachers to bring creationist materials into the classroom and members of the community to pressure teachers to do so. Middle and High School curricula need to educate our students to be science-literate citizens, providing them the fundamentals about how our planet operates, how we acquire data to support or invalidate hypotheses about Earth (in the broadest sense), and how our understanding of these concepts and ideas are modified over time as inquiry continues and new information is validated. Blaming eugenics on evolution is unfounded. Although the performance expectations would remain unaltered, teachers would be encouraged to teach these inaccurate and misleading claims about eugenics, the Holocaust, and whatever other possible topic, while teaching materials intended to help their students meet those expectations. The adoption of the current version undermines the integrity of the curriculum and the foundation of our forthcoming citizenry. The current document should be returned for revision before adoption.

Respectfully submitted,



Prof. Robert A. Gastaldo, emeritus