

Awards and Citations

Presentation of the 2021 Paleontological Society Medal to Scott L. Wing

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We could not be more excited to introduce Scott L. Wing, recipient of the 2021 Paleontological Society Medal. Scott is an ecosystem-builder who carefully coordinates and facilitates diverse, multidisciplinary research groups whose works are greater than the sum of their parts. He is front and center among paleontologists in using deep-time knowledge to inform conservation and climate change policy. And by leading by example, he encourages his many, many collaborators to hold themselves to the highest standards for research and integrity.

Scott's research begins in the field: part of Scott's research super powers is that he is among the best in the world at discovering, collecting, and documenting fossil plants, as well as interpreting the rocks encasing them. This summer will mark Scott's 50th doing fieldwork in the Bighorn Basin, where he has created an unparalleled record of terrestrial ecosystems and paleoclimates. He has been a pioneer for applying ecological techniques to paleobotanical assemblages, best exemplified by his work at the ca. 73 Ma Big Cedar Ridge site. For decades, he has led large, multidisciplinary groups that have worked to shed light on the Paleocene–Eocene Thermal Maximum (PETM), preserved in Bighorn Basin sections. With his collaborators, Scott has carefully mapped the strata and then analyzed them to investigate not just the floras, but also reconstruct CO₂ levels, temperature, hydrology, faunas, soil processes, and microbial activity, to mention just a few topics. The result has been that the PETM is one of the best understood climate change events in Earth history, one that is commonly probed to better understand current global warming. This research has motivated Scott to be a vocal advocate for decreasing carbon dioxide emissions, including speaking at Davos and to the Senate, and putting climate change front and center in the Smithsonian's new Deep Time exhibit.

Beyond the PETM, Scott has contributed profoundly to a range of core problems within paleobotany and paleoecology, including (1) plant diversity through time, taking ecology and taphonomy into consideration (Wing and DiMichele, 1995); (2) plant-animal interactions during major Earth-life transitions, including dinosaur-angiosperm co-evolution (Wing and Tiffany, 1987) and plant-mammal (Wing et al., 1995) and plant-insect (Currano et al., 2008) response to climate change; (3) how plants respond to mass extinctions (Wing, 2004);

(4) patterns and processes relating to the rise of angiosperms and how the ecology of early angiosperms shaped these patterns/processes (Wing and Boucher, 1998; Wing et al., 2012); (5) origins of Neotropical diversity (Wing et al., 2009); (6) using leaf morphology to extract climatic, ecological, or taxonomic information (Wilf et al., 1998); (7) reconciling climate proxies and models (Greenwood and Wing, 1995); and (8) the Pleistocene megafaunal extinction and work to establish baselines for human impacts (Barnosky et al., 2004).

A common theme for Scott's career is that he leads interdisciplinary groups whose synergistic works benefit the community at large, often across multiple disciplines. For example, Scott is a founding member of the NMNH's Evolution of Terrestrial Ecosystems (ETE) group, which published the seminal book *Terrestrial Ecosystems through Time* (Behrensmeyer et al., 1992). It defined how terrestrial paleoecology should be done and provided the first synthesis of how Earth's ecosystems have changed through time. Despite being nearly 30 years old, it continues to inspire paleoecologists today. Likewise, Scott helped found the Leaf Architecture Working Group, a multidisciplinary team that produced the *Manual of Leaf Architecture* (Ellis et al., 2009), now the standard for both living and fossil leaves.

Two of Scott's most wonderful traits are his unfailingly kind personality and his lovely sense of often self-deprecating humor. He is incredibly generous with his time in and out of the field, giving endless tours of the Bighorn Basin sections to collaborators and students and sharing his knowledge. He is the opposite of intimidating, something that helps him be an effective mentor for an enormous and diverse array of mentees. Even when he vehemently disagrees with someone (be it about leaf shape or politics), he argues his case in a carefully thought-out, respectful way and listens to alternate opinions. He loves a good scientific discussion with non-scientists and decorated colleagues, alike.

Scott, on behalf of those who will forever consider you their “academic papa,” thank you for inviting us in, sharing the excitement, and encouraging us to look for innovation. You have inspired us to be better scientists, leaders, and, most importantly, human beings. We look forward to celebrating in person, camped out in the badlands of the Bighorn Basin with Dino parked nearby, eating chicken on a shovel, and telling stories.

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