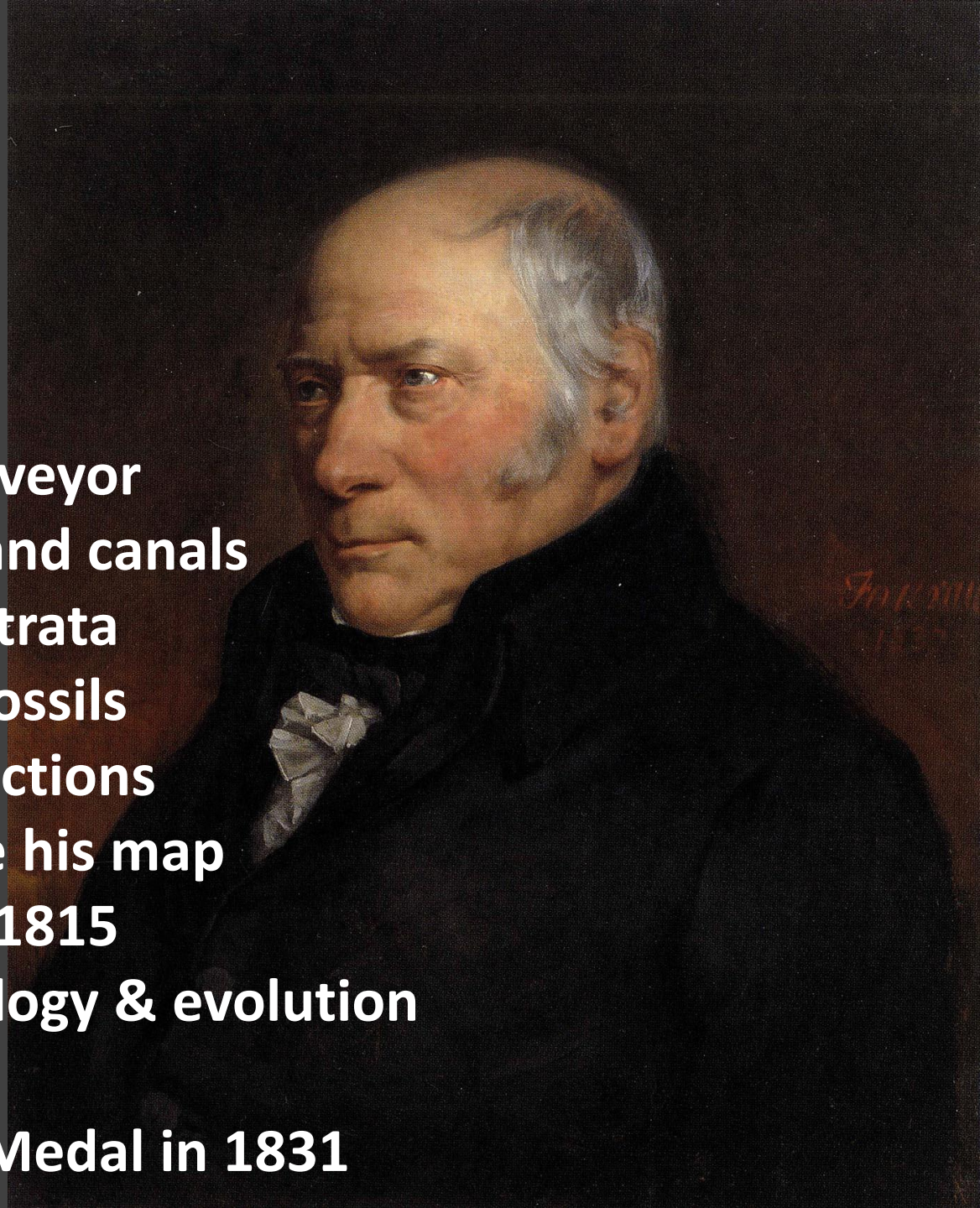


Sketch of the Succession of STRATA and their relative Altitudes. N^o. 53.

William Smith

1769 –1839

- **Left school at age 11**
- **Apprenticed as a surveyor**
- **Worked coal mines and canals**
- **Began to recognize strata**
- **Began to recognize fossils**
- **Began to make predictions**
- **Managed to produce his map**
- **Published August 1, 1815**
- **Groundwork for geology & evolution**
- **Spent time in jail**
- **Won the Wollaston Medal in 1831**



SIMON
WINCHESTER

✠
Author of the National Bestseller
The Professor and the Madman

the
MAP THAT
CHANGED
the WORLD



William Smith and the Birth of Modern Geology



The third century of geological mapping

- In geological mapping, the current acceleration of data acquisition, technological progress, and scientific insights is concurrent with escalating societal demands related to energy, minerals, water, hazards, climate change, environment, waste, and engineering, as well as research priorities**
- The third century of geological mapping therefore is being launched with a renewed determination to fulfil our obligations to society**

The third century of geological mapping

Much about geological mapping is unchanged since 1815:

- focused on user needs while accommodating unanticipated applications
- well-planned and based on ongoing assessment of required data
- based on compilation of available data, new field work, and required analyses
- based on sound naming of strata
- focused on the highest level of detail where needed
- assembled as a jurisdiction-wide seamless compilation
- committed to regular updating

The third century of geological mapping

- What has changed, as with all fields, is the move of geological mapping from the library to the database, and on to the GIS and the web
- As we observe on our phones, this means that all mapping now must be seamless, queryable, coordinated, and zoomable, while retaining peer-review
- While the most detailed mapping will continue where needed, we now require a complete and jurisdiction-wide compilation of quadrangle and county-scale mapping to support applications and to manage content ASAP

The third century of geological mapping

Furthermore, due to the demands of users and the opportunities of technology, we need to:

- reconcile mapping from onshore to offshore
- reconcile mapping with topographic and bathymetric data
- coordinate with soil mapping
- map on a material properties basis
- categorize using accepted terminology
- map in 3D
- coordinate with 3D regional, continental, and global maps
- link mapping to associated databases
- ensure that mapping is readily accessible

