

Engelbrecht, Jüri & Tammiksaar, Erki (2018), *Eesti Teaduse 100 aastat. Sajaga tippteaduse kursil* [Estonian science in a 100 years: Full speed ahead on the course of excellence in research], Tallinn: Eesti Meedia AS, 192pp, ISBN 978-9-949-60336-7.

Science, as they say, “stands on the shoulders of giants” and as such the aim of the publication by Engelbrecht and Tammiksaar is to “correlate scientific achievements with the people who made them” while providing an overview of Estonian scientific research (p. 9). In a way, both men are excellent for the task that the book aims for—Professor Jüri Engelbrecht was President of the Estonian Academy of Sciences from 1994 to 2014, he holds a degree in civil engineering and a Ph.D. in mechanics, and has held the title of professor emeritus at Tallinn University of Technology since 2016. Dr. Erki Tammiksaar is a senior research fellow in the history of geography at the University of Tartu Institute of Ecology and Earth Sciences and at the Centre for Science Studies of the Estonian University of Life Sciences.

During 2018 and 2019, forty-four books of generally less than 250 pages have been published to provide an overview of Estonian history in various fields for the country’s centennial celebrations. (<https://www.ev100.ee/en/estonia-100-book-series>) This book is part of this series, which however, sets problematic limitations that the authors have had to accommodate. Thus, the authors have had to divide their book of only 200 pages into three sections: an overview of the history of research practices, 24 areas of scientific achievements, and the short biography of 11 scientists.

Tammiksaar attempts his best at creating an overview of the environment of Estonia, introducing the political context, as the authors explain that Estonian science cannot be understood without understanding the political history of the country (p. 9). There are common themes throughout the 100 years and Tammiksaar is good at pointing them out: lack of posterity, primarily due to language issues (not enough Estonian-speaking scientists) but also due to migration during war (those who could speak Estonian would escape or were sent to concentration camps) and the large-scale migration of highly-skilled workers and researchers in the modern era.

A challenging area in the book are the 24 areas of research excellence. As the authors point out, scientific research tends to “focus on the newest technologies and older discoveries have to survive the baptism of fire” (p. 48). This section of the book falls victim to the page count as the authors seem to gallop through each field, presenting the scientists and their discoveries one after another. Knowledge of the fields is necessary to understand the importance of the contribution. It is great for an astronomer or economist to know the contribution of Estonians to their fields, but for the general reader the information can be quite overwhelming. For the reader, the knowledge does emerge that four Estonian scientists (Andres Metspalu, Ülo Niinemets, Martin Zobel, and Tõnu Esko) have made it to the Thomson Reuters 3,000 list of most influential scientists (pp. 119–120) and that the publications of Estonian scientists rank the 16th in citations (p. 119).

The third section is dedicated to 11 groundbreakers in science (Prof. Ludvig Puusepp, Yuri Lotman, Ernst Öpik, and others) whose biographies and scientific work have been summed up by 11 authors. The book concludes with a brief review of the Estonian Academy of Sciences and the Estonian Young Academy of Sciences.

A common theme in this book, as well as in the series in general, is “how is this possible in such a small country”. As is typical for any small country, there is a certain need to grasp the attention of the wider community and to prove that a small country is worth their weight in gold in scientific research. While the book succeeds in giving a name to the individual behind a discovery, the authors were not given enough space to introduce the persons behind those names.

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