

School of Biological Sciences

Spring 2017



THE LECTURE SERIES AND ITS PURPOSE

The R. Omar and Evelyn Rilett Family Life Sciences Lecture Series was established in April 2007. It recognizes Dr. Rilett's vision and leadership, which built a Department of Biological Sciences at Illinois State University that advanced education in the natural sciences, fostered scholarly endeavors, and nurtured the development of research to the benefit of all who chose to teach and learn at this institution. The purpose is to bring outstanding life scientists and lectures to Illinois State University to benefit academic and local communities.

School of Biological Sciences

presents

**The R. Omar and Evelyn Rilett
Family Life Sciences Lecture
Series**

Co-Sponsored by the
School of Biological Sciences, Phi Sigma
Biological Sciences Honor Society, and the
Harold K. Sage Fund

Dr. John P. Smol, O.C., F.R.S.C.



**Professor
Department of Biology
Queen's University**

**Thursday, April 27, 2017 at 4:00 PM
Prairie Room, Bone Student Center**

**Illinois State University
LECTURE SERIES PROGRAM**

WELCOME AND HISTORY OF LECTURE SERIES

Dr. Craig Gatto
Director, School of Biological Sciences

INTRODUCTION OF SPEAKER

Dr. Scott Sakaluk
School of Biological Sciences

PRESENTATION

**On thin ice: long-term changes in polar ecosystems
linked to recent warming**

Interest in Arctic environments has increased over recent years, largely because potential warming is predicted to be greatest in high-latitude regions. As a result, attention has been directed toward the use of Arctic lakes and ponds as monitoring sites. Because direct long-term monitoring data are not available, indirect methods must be used to infer past ecological conditions. Fortunately, lakes archive a tremendously important library of information of past changes in their sediments, much like “time machines.” For example, a large number of organisms leave fossil indicators in lake sediments that we use to track past environmental conditions. This lecture will summarize research documenting that striking and often unprecedented ecological changes have occurred in Arctic regions over the recent past. In fact, some of these ponds, which we know have been permanent water bodies for millennia, have completely dried up because of increased warming. These startling environmental changes have important implications for all parts of our planet.

Dr. John P. Smol

JOHN P. SMOL, OC, PhD, FRSC, is Professor of biology at Queen’s University (Kingston, Ontario), where he also holds the *Canada Research Chair in Environmental Change*. John founded and co-directs the Paleoeological Environmental Assessment and Research Lab, a group of ~40 students and other scientists dedicated to the study of long-term global environmental change, and especially as it relates to lake ecosystems. John has authored over 500 journal publications and chapters since 1980, as well as completed 21 books. Much of his research deals with the impacts of climatic change, acidification, eutrophication, contaminant transport, and other environmental stressors. He has led research on circumpolar Arctic lakes for over three decades. John was the founding Editor of the international *Journal of Paleolimnology* and is the current Editor of the journal *Environmental Reviews*. Since 1990 John has been awarded about 60 research and teaching awards and fellowships, including the *2004 NSERC Herzberg Gold Medal* as Canada’s top scientist or engineer and the most recent winner of the *International Ecology Institute Prize*. Smol holds the distinction of being the first scientist since the establishment of the Royal Society of Canada (founded in 1883) to win three individual medals, having won the *Miroslav Romanowski Medal* for environmental sciences, the *Flavelle Medal* for biological sciences, and, in 2015, the *McNeil Medal for the Public Awareness of Science*. He has won 11 teaching, mentoring, and scientific outreach awards, and was named by *Nature* magazine, following a nation-wide search, to be Canada’s Top Mid-Career Scientific Mentor. He is currently Chair of the *International Paleolimnology Association*. In 2013, John was named an Officer of the *Order of Canada*, the country’s highest civilian honor, for his environmental work.