EXPO'90
FOUNDATION

Press Release

July 22, 2019

The Winner of the 2019 (27th) International Cosmos Prize is:

Prof. Stuart L. Pimm

Doris Duke Professor of Conservation Ecology Nicholas School of the Environment and Earth Science, Duke University

Outstanding contributions to the conservation of ecological habitat and biodiversity both in theory and practice

On July 22th, 2019, The Commemorative Foundation for the International Garden and Greenery Exposition, Osaka, Japan, 1990 (Expo '90 Foundation) (Chairperson: Mr. Fujio Mitarai) selected Prof. Stuart L. Pimm, Doris Duke Professor of Conservation Ecology Nicholas School of the Environment and Earth Science, Duke University, (70), as the winner of the 2019 (27th) International Cosmos Prize. The decision to award the prize to Prof. Stuart L. Pimm was reached after considering the recommendations submitted by the International Cosmos Prize Committee (Chairperson: Dr. Kazuo Oike) and Screening Committee of Experts (Chairperson: Dr. Yoshihiro Hayashi).

Professor Stuart L. Pimm's mathematical models have established the theoretical basis for understanding the complexities of food webs, the speed of species extinction and other such factors critical to the conservation of ecological habitats worldwide. He has established the non-profit foundation, "SavingNature" (formerly called "SavingSpecies") to take this work on conservation science into practical application in the field by supporting local groups in their habitat conservation activities and directing biodiversity conservation policy formulation based on scientific foundations. Pimm's contributions through this marriage of theory and practice in the field of habitat and species preservation are most impressive.

The photo is at the following URL:
https://www.expo-cosmos.or.jp/2019.jpg

Selection Process:

(1) 2019 International Cosmos Prize Nominees

149 nominations (from 33 countries)

＜Breakdown by Year＞

Candidates since 2017: 57
Candidates since 2018: 34
Candidates since 2019: 58
(Candidacy is valid for three years.)

＜Breakdown by Country＞

Japan (44), The United States (34), Germany(13), France(7), The United Kingdom (6), Egypt(4), India(4), Netherlands(3), Canada(3), Malaysia(3), South Africa(3), Australia(2), Spain(2), Chile(2), Ireland (1), Argentina(1), Italy(1), Ecuador(1), Korea(1), Kyrgyz (1), Kenya(1), Singapore (1), Switzerland(1), China(1), Tunisia (1), Turkey(1), Hungary (1), Finland(1), Brazil(1), Burkina Faso(1), Belarus(1), Belgium(1), Portugal (1)

(2) Selection Process

The International Cosmos Prize Screening Committee of Experts met 3 times between May and July of 2019 in order to evaluate candidates for the prize. After careful deliberations, the winner was selected at the International Cosmos Prize Committee on July 1th.

The board of directors of the Expo'90 Foundation held the meeting on July 22th and after careful deliberation on the report submitted by the Cosmos Prize Committee, selected Prof. Stuart L. Pimm as the winner of this year's International Cosmos Prize.

Others:

(1) Award Ceremony

The award ceremony will be held at Izumi Hall in Shiromi, Chuo-ku, Osaka on Thursday, November 7th, 2019.

(2) Others

The prizewinner shall be awarded a certificate of merit, a medallion, and a monetary prize of 40 million yen.

Attached documents:

Curriculum Vitae
Reason for Awarding the Prize
Comments (on receiving the Prize) by the prizewinner
Prizewinners 1993-2018
The International Cosmos Prize Committee, the Screening Committee of Experts

For further information, please contact:

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Curriculum Vitae

Name: Stuart L. Pimm

Date of Birth: February 27, 1949 (Born in Derbyshire, The United Kingdom)

Nationality: The United States

Current Position: Doris Duke Professor of Conservation Ecology Nicholas School of the Environment and Earth Science, Duke University

Professional Preparation:

1971	University of Oxford Zoology B.A.
1974	New Mexico State University Ecology Ph.D.

Appointments:

1974-1975	Assistant Professor, Clemson University
1975-1979	Assistant Professor, Texas Tech University
1979-1982	Associate Professor, Texas Tech University
1982-1986	Associate Professor, Department of Ecology and Evolutionary Biology (EEB), University of Tennessee
1986-1999	Professor, EEB, University of Tennessee
1999-2002	Professor, Center for Environmental Research and Conservation/Ecology, Evolution, & Environmental Biology, Columbia University
2001-2010	(Visiting) Extraordinary Professor, Conservation Ecology Research Unit, University of Pretoria
2002-now	Doris Duke Professor of Conservation Ecology Nicholas School of the Environment and Earth Science, Duke University

International Awards:

2006	The Dr. A.H. Heineken Prize for Environmental Sciences on behalf of the Royal Netherlands Academy of Arts and Sciences.
2010	John and Alice Tyler Prize for Environmental Achievement

Select publications (from a total of ~340):

1. Pimm, S. L. 1984. The complexity and stability of ecosystems. Nature 307:321–326. (A review article and it provided the cover for its issue of the journal.)
2. Pimm, S. L. 1986. Community structure and stability. In Conservation Biology, ed. M. Soulé. Sinauer Associates, Sunderland, MA.
3. Pimm, S. L., H. L. Jones and J. M. Diamond. 1988. On the risk of extinction. American Naturalist 132:757–785.
4. Pimm, S. L., J. H. Lawton and J. E. Cohen. 1991. Food webs patterns and their consequences. Nature 350:669–674. (A review article)
5. Pimm, S. L. and A. M. Sugden. 1994 Tropical diversity and global change. Science 263:933–934. Cairns, John Jr., Hampton L. Carson, Jared M. Diamond, Thomas Eisner, Stephen Jay Gould, Daniel H. Janzen, Jane Lubchenco, Ernst Mayr, Charles D. Michener, Gordon H. Orians, Stuart L. Pimm, Daniel Simberloff, John W. Terborgh and Edward O. Wilson. 1995. Brief of Amici Curiae Scientists, in the Supreme Court of the United States, February 17. (The Supreme Court's decision in this case (Sweet Home versus Babbitt) agreed with our arguments that a loss of habitat constitutes a "take" of endangered species, just as does killing such species directly.)
6. Pimm, S. L., G. J. Russell, J. L. Gittleman and T. M. Brooks. 1995. The future of biodiversity. Science 269:347–350. (A review article)
7. Pimm, S. L. and R. Askins. 1995. Forest losses predict bird extinctions in eastern North America. Proceedings of the National Academy of Sciences (U.S.A.) 92:9343–9347. (This paper was the subject of articles in the New York Times of Sept. 26th 1995 and June 10th 1997.)
8. Pimm, S. L. 1997. The value of everything. Nature 387:231–232. (The paper by Constanza et al. that this article discusses was covered by many newspapers and radio programmes, worldwide. Pimm's comments appeared in several of these, including Newsweek.)
9. Brooks, T. M., S. L. Pimm and N. J. Collar. 1997. Deforestation predicts the number of threatened birds in insular southeast Asia. Conservation Biology 11:382–384.
10. Pimm, S. L. and 32 others. 2001. Can we defy Nature's end? Science 233: 2207-2208.
11. Liu, Jianguo, Z. Ouyang, S. L. Pimm, P.H. Raven, X. Wang, M. Xiaoke, H. Hong, and N. Han. 2003. Protecting China's Biodiversity. Science 300: 1240-1241
12. Pimm, S.L., L. Dollar, and O. L. Bass, Jr. 2006. The Genetic Rescue of the Florida Panther. Animal Conservation 9: 115-122
13. Pimm, S. L., P. Raven, A. Peterson, C. H. Sekercioglu, and P. R. Ehrlich. 2006. Human impacts on the rates of recent, present, and future bird extinctions. Proceedings of the National Academy of Sciences (U.S.A.) 103: 10941-10946.
14. Montoya, J. M., S. L. Pimm and R.V. Solé 2006. Ecological networks and their fragility. Nature 442: 259-264. (A review article and it provided the cover for its issue of the journal.)
15. Pimm, S. L. 2008. Biodiversity: climate change or habitat loss — which will kill more species? Current Biology 18: 117-119
16. Joppa, L.N, S.R. Loarie, and S. L. Pimm. 2008. On the protection of "protected areas." Proceedings of the National Academy of Sciences (U.S.A.) 105:6673-6678.

17. Finer, M, C. N. Jenkins, S. L. Pimm, B. Keane, C. Ross 2008. Oil and gas projects in the Western Amazon: threats to wilderness, biodiversity, and indigenous peoples. PLOS ONE 3: e2932.'
18. Adeney, J. M., N. L. Christensen Jr., and S. L. Pimm 2009. Reserves protect against deforestation fires in the Amazon. PLOS One, e5014.
19. Joppa, L. N, D. L. Roberts, and S. L. Pimm (2011). How many species of flowering plants are there? Proceedings of the Royal Society (B) 278: 554-559.
20. Forero-Medina, G, J. Terborgh, S. J. Scolar, and S. L. Pimm (2011). Elevational ranges of birds on a tropical montane gradient lag behind warming temperatures. PLOS One e28535
21. Joppa, L.N., P. Visconti, C. N. Jenkins, and S.L. Pimm (2013). Achieving the Convention on Biological Diversity's goals for plant conservation. Science 341, 1100-1103 (2013).
22. Jenkins, C. N., S. L. Pimm, and L. N. Joppa (2013). Global patterns of terrestrial vertebrate diversity and conservation. Proceedings of the National Academy of Sciences (U.S.A.).
23. Pimm, S. L., C. N. Jenkins, R. Abell, T. M. Brooks, J. L. Gittleman, L. N. Joppa, P. H. Raven, C. M. Roberts, J. O. Sexton (2014) The biodiversity of species and their rates of extinction, distribution, and protection. Science 344, 987. (review article: full version online. DOI: 10.1126/science.1246752
24. deVos, J. M., L. N. Joppa, J.L. Gittleman, P. R. Stephens, and S. L. Pimm (2015). Estimating the normal background rate of species extinction. Conservation Biology 29: 452-462
25. Pimm, S.L., S. Alibhai, R. Bergl, A.Dehgan, C. Giri, Z Jewell, L. N. Joppa, R Kays, and S. Loarie (2015). Emerging Technologies to Conserve Biodiversity, Trends in Ecology and Evolution 30: 685-696.
26. Jenkins, C.N., K.S. van Houtan, S. L. Pimm, and J. O. Sexton, 2015. U.S. Protected Lands Mismatch Biodiversity Priorities. Proceedings of the National Academy of Sciences (U.S.A.) 112: 5081-5086.
27. Li, B. V., A. C. Hughes, C N. Jenkins, N. Ocampo-Peñuela, and S. L. Pimm (2016), Remotely-sensed data inform Red List evaluations and conservation priorities in South East Asia. PloS One 0160566.
28. Xu, W., X. Li, S. L. Pimm, V. Hull, J. Zhang, L. Zhang, Y. Xiao, H. Zheng, and Z. Ouyang. (2016). The effectiveness of the zoning of China's protected areas.
29. Ocampo-Peñuela, N., C. N. Jenkins, V. Vijay, B. V. Li and S. L. Pimm (2016). Incorporating explicit geospatial data shows more species at risk of extinction than the current Red List. ScienceAdvances 2: e1601367.
30. Newmark, W. D, C. N. Jenkins, S. L. Pimm, P. B. McNeallyd, and J. M. Halley (2017) Targeted habitat restoration can reduce extinction rates in fragmented forests . Proceedings of the National Academy of Sciences: 114: 9635–9640
31. Xu, W, A. Viña, L. Kong, S. L. Pimm, J. Zhang, W. Yang, Y. Xiao, L. Zhang, X. Chen, J. Liu and Z. Ouyang. (2017) Reassessing the conservation status of the giant panda using remote sensing. Nature Ecology and Evolution. DOI:10.1038/s41559-017-0317-
32. Pimm, S. L., Jenkins, C. N. and Li, B.V. (2018). How to protect half of Earth to ensure it protects sufficient biodiversity. Science Advances, 4. eaat2616.
33. Pimm SL, Jenkins CN. Connecting Habitats to Prevent Species Extinctions. American Scientist. 2019 May 1;107(3):162-9.

Books:

1. Pimm, S. L. 1982. Food Webs. Chapman and Hall, London. 219 pp.
2. Pimm, S. L. 1991. The Balance of Nature? Ecological issues in the conservation of species and communities. University of Chicago Press, Chicago, IL. 434 pp.
3. Pimm, S. L. 2001. The World According to Pimm: a Scientist Audits the Earth. McGraw Hill, New York. 304 pp.
4. Sanderson, J. G. and S. L. Pimm 2015. Patterns in Nature: The Analysis of Species Cooccurrences. University of Chicago Press, Chicago IL

Reasons for the Award

Professor Stuart L. Pimm's mathematical models have established the theoretical basis for understanding the complexities of food webs, the speed of species extinction and other such factors critical to the conservation of ecological habitats worldwide. He has established the non-profit foundation, "SavingNature" (formerly called "SavingSpecies") to take this work on conservation science into practical application in the field by supporting local groups in their habitat conservation activities and directing biodiversity conservation policy formulation based on scientific foundations. Pimm's contributions through this marriage of theory and practice in the field of habitat and species preservation are most impressive.

Commencing with his pioneering work on in the late 1970 to early 1980s on Food Webs and its dynamics, the patterns they exhibit in different habitats and the relationship of these patterns to broader environmental processes, Pimm has gone on to verify the results of these pioneering investigations in the field. His works activated studies in the subsequent decades on food webs in ecological habitats. Being the meticulous scientist that he is, he has been described as the person who "put the science into environmental science".

Moving on to ecological conservation in the 1990s, Pimm warned us that the global rate of species extinction was around 1000 times the rate at which it would be naturally expected to happen due to habitat destruction by humans. This figure was a pioneering calculation of the speed of species extinction, and led to estimations cited in the Global Biodiversity Outlook or the Millennium Ecosystem Assessment. Improved investigative methods, to which Pimm himself has also contributed, continue to show that estimation of the number of species worldwide, calculation of species extinction rates and the nature of human incursion are critical inputs for prioritizing ecological habitat conservation.

Indeed, there is no "one size fits all" solution to save species from extinction. Together with works on the conservation of flagship species (symbolic species for conservation), Pimm has shown that species with smaller breeding ranges and foraging habitats are more vulnerable to extinction, largely because they might go unnoticed and their smaller habitats more easily destroyed by the march of human civilization. Proof of this is evident in his early work along the Atlantic coast of Brazil, in the Amazonian rainforest and the tropical forests of Tanzania.

These works led him to establish the international non-profit foundation, "SavingSpecies" in 2007. The achievements of this foundation lie in directing Pimm's rigorously validated contributions to conservation science to slow down the rate of species extinction pragmatically in biodiversity hotspots across the world. He sees habitat fragmentation as a major contributor to the rapidity of biodiversity loss. "SavingSpecies" has worked towards creating natural corridors linking fragmented habitats to form larger conservation areas by funding local communities to purchase the land required and empowering them to manage these areas. Through these efforts, he has shown that the rate of species extinction can be slowed down. "SavingSpecies" has been reborn (in July 2019) as "SavingNature", expanding its mandate from "saving species" to "saving nature itself. "SavingNature" defines its activities with the tag line, "CPR for earth", i.e. Connect (fragmented habitats); Protect (endangered species) and Restore (biological diversity).

As indicated above, Pimm has taken his scientific discoveries to shape policy formulation for ecological habitat conservation and to guide its practice in the field. His substantial achievements worldwide have contributed greatly to "The Harmonious Coexistence between Nature and Mankind", the very essence of the International Cosmos Prize. This lies at the heart of his selection as the winner of the Prize for 2019.

Comment by the prizewinner

I am honoured to receive the International Cosmos Prize for 2019. For one's work to be so recognised is profoundly moving. This is a singular prize for it celebrates the harmonious coexistence between humankind and nature — the core theme of my science.

My passion for nature came from my parents. They met while hiking the hills of my native Derbyshire. In all weather, weekends and holidays were devoted to camping, walking, and exploring Britain's nature. Theirs was a broad curiosity, so I learned about fossils and flowers, birds, and everything else. In school, I became a committed birdwatcher. Derby's natural history and ornithological societies were effective nurseries for my interests, shaping lifelong interests and skills.

I went to Oxford University because ornithologists concentrated there. In two summers, I joined undergraduate expeditions to Band-e-Amir, Afghanistan's first National Park, to ring migratory birds. Deserts fascinated me, so I chose New Mexico State University for my Ph.D to specialise on them. By a quirk of fate, I visited Hawai'i in 1978. My life changed dramatically—and not just from swapping wet places for dry ones.

I worked on three species of honeycreepers; one, the i'iwi, was in serious decline. Additionally, I expected to see many other species of birds as I travelled the islands. I didn't—and that was a shock. Some were already extinct, some close to it, and some I did see are now extinct. I saw flowering plants down to a handful of individuals in the wild. These experiences generated an enormous sense of loss, indeed of outrage, about this destruction of natural heritage. The ethical challenge to ensure harmonious coexistence means we must not deprive future generations of the biodiversity we inherited. Hawai'i posed a scientific challenge, too, allowing me to understand why the i'iwi and other species were declining to extinction.

Since Hawai'i, my contributions have been to establish a well-documented and seamless translation between global issues of biodiversity loss and ultimate practical actions of where to plant to restore ecosystems.

How fast are species going extinct? In 1995, I introduced the now-standard measure of the magnitude of the current extinction crisis. Species are going extinct a thousand times faster than they should naturally is now a familiar statistic from Al Gore's An Inconvenient Truth to the recent United Nations IPBES report.

What places are conservation priorities? I have mapped out where most species are at greatest risk of extinction, globally for animals and plants (see www.biodiversitymapping.org). Especially for plants, I've asked how many species are as-yet unknown taxonomically and where those species might live.

These efforts have international policy implications. I have sought shape this debate by examining how best to expand the protected area networks beyond the existing targets.

Practical conservation actions require moving to first regional scales, then local ones. With case studies across the tropics, incorporating GIS and remote sensing data show that concentrations of threatened species live in highly fragmented landscapes. There are problems with fragments. Populations on oceanic islands and "habitat islands" go extinct quickly.

The solution is to connect, protect, and restore fragmented habitats. In 2007, I founded SavingSpecies, and in 2019 expanded its mission with SavingNature www.savingnature.com. The above themes unite in a practical recipe. Select regions with concentrations of threatened species, find the exact places are the most important, and then re-establish habitat connections between isolated habitat fragments.

To live harmoniously with nature, we cannot lose species to extinction. I am deeply grateful for the recognition of my efforts to prevent extinctions and the opportunities this prize offers to continue my work.

PRIZEWINNERS 1993-2018

1993 Sir Ghillean Prance

Director, Royal Botanic Gardens, Kew, U.K.

An authority on tropical plants centering on those of the Amazon basin of South America, Dr. Prance advocates his Flora-on-the-Earth Project to establish a comprehensive record of the earth's vegetation in the form of a database.

1994 Dr. Jacques François Barrau (deceased)

Professor, Paris National Museum of Natural History, France

Dr. Barrau has conducted ethnobiological studies on nature and the life styles of people in the Pacific Ocean. His results have afforded unique insights into the relationship between human beings and food from a global perspective.

1995 Dr. Tatuo Kira (deceased)

Professor Emeritus, Osaka City University, Japan

On the basis of his quantitative research on plants' organic production, Dr. Kira has established “Production Ecology". He has also played a leading role in conducting field studies of the ecosystem in tropical rainforests in Southeast Asia.

1996 Dr. George Beals Schaller

Director of Science, the Wildlife Conservation Society, U.S.A.

Dr. Schaller has been conducting field research on the ecology and behavior of various wild animals in all parts of the world, and has written many books including “The Mountain Gorilla" and “The Last Panda."

1997 Dr. Richard Dawkins

Professor, Oxford University, U.K.

Dr. Dawkins totally reversed the conventional view of biology with a bold hypothesis he put forward in his 1976 book. He continues to present new views.

1998 Dr. Jared Mason Diamond

Professor, University of California at Los Angeles, U.S.A.

Dr. Diamond has made remarkable achievements in physiology. He has been organizing field expeditions to New Guinea and has employed the results of this fieldwork to restructure his unique studies of the evolution of human societies.

1999 Dr. Wu Zheng-Yi (deceased)

Professor and Director Emeritus, Kunming Institute of Botany, Chinese Academy of Sciences, China

Dr. Wu is a representative botanist of China. He edited “Flora of China" which describes all known plant species in China.

2000 Sir David Attenborough

Producer, Naturalist, Zoologist, U.K.

Sir David is a pioneer of wildlife documentary films. With his excellent films of various creatures or plants, he has told many people throughout the world about the nature of life for more than fifty years since joined the BBC.

2001 Prof. Anne Whiston Spirn

Professor, Massachusetts Institute of Technology, U.S.A.

Based on the principle, “Cities must not conflict with nature, it is possible to build cities that exists as part of nature", she proposes measures to develop cities while maintaining harmony with nature.

2002 The Charles Darwin Research Station

The Charles Darwin Research Station is a biological research center established in 1964 by the international NGO/NPO Charles Darwin Foundation in the Galapagos Islands of Ecuador.

The Station has made remarkable achievement in research and protection of the numerous indigenous species of the Island, including elephant tortoises and marine iguanas.

2003 Dr. Peter Hamilton Raven

Director, Missouri Botanical Garden, U.S.A.

Dr. Raven is a representative botanist of the U.S., and international pioneer in advocating for the conservation of global biodiversity. He has given his approach toward issues concerning life on earth from a global viewpoint and his significant contributions toward promoting the co-existence of nature and human beings in both academic and practical terms.

2004 Prof. Julia Carabias Lillo

Professor, National Autonomous University of Mexico, Mexico

Professor Carabias has always considered global environmental issues from the perspective of developing countries. She has achieved excellent results in resolving difficult challenges under different conditions, through the implementation of programs based on thorough fieldwork with a multidisciplinary approach.

2005 Dr. Daniel Pauly

Professor and Director, Fisheries Centre, University of British Columbia, Canada

Pursuing his comprehensive studies of the relationship between fishing and marine ecosystem, Dr. Pauly has made outstanding achievements in the field of research into marine ecosystems and resources, including the development of scientific models to enable both marine ecosystem conservation and sustainable resource use of fisheries.

2006 Dr. Raman Sukumar

Professor, Centre for Ecological Sciences, Indian Institute of Science, India

A strong advocate of preserving biodiversity and the environment, Dr.Sukumar has done pioneering research on the ecological relationship between elephants and humans, and on resolving the conflict between them, making him an internationally recognized expert on the coexistence of wildlife and humans.

2007 Dr. Georgina Mary Mace

Professor of Conservation Science and Director of NERC Centre for Population Biology, Imperial College, London, U.K.

Dr.Mace played a significant role in the creation of scientific criteria for the identification and classification of threatened species. She has also contributed to the conservation of species and biodiversity.

2008 Dr. Phan Nguyen Hong

Professor Emeritus, Hanoi National University of Education, Vietnam

Dr. Phan has been involved in comprehensive scientific research in Vietnam, where war and overdevelopment have had a devastating impact on its mangrove ecosystem. He has made a major contribution to the restoration of the mangrove forests.

2009 Dr. Gretchen Cara Daily

Professor, Stanford University, U.S.A.

Dr. Daily has provided us with a comprehensive picture of the value of biodiversity-based ecosystem services, upon which human society is dependent. She has made a vital contribution to international initiatives such as the U.N. Millennium Ecosystem Assessment, and played a leading role in launching the "Natural Capital Project," which is a result of the fusion of ecology and economics, in order to promote the sustainable utilization of natural capital.

2010 Dr. Estella Bergere Leopold

Professor Emeritus, University of Washington, U.S.A.

Dr. Leopold has made tremendous achievements by continuing and further developing the Land Ethic, which was initiated by her father, Aldo Leopold (1887-1948), as well as by disseminating the idea to many places in the United States. She is still pursuing activities that weave the Land Ethic into the fabric of people's lives and society.

2011 Scientific Steering Committee of the Census of Marine Life

The Scientific Steering Committee of the Census of Marine Life provided overall governance to the Census, a grand global project. The objective of the Census was to survey and analyze changes from past to present in marine life biodiversity, distribution and abundance, and to compile the resultant data into a comprehensive database called the "Ocean Biogeographic Information System" to be used in forecasting the future of marine life.

2012 Dr. Edward Osborne Wilson

Pellegrino University Research Professor ,Emeritus, Harvard University, U.S.A.

Dr. Wilson has accomplished outstanding achievements in his research into the natural history of ants and ethology. He has focused his scientific perspective and experience on helping to illuminate the human circumstance, including human origins, human nature and human interactions. Dr. Wilson has also been active in practicing biodiversity conservation and environmental education.

2013 Dr. Robert Treat Paine (deceased)

Professor emeritus of Zoology, University of Washington, U.S.A.

Dr. Paine has demonstrated, through explicit field experiments, that predators play essential roles in the stable maintenance of biotic communities. He proposed the concept of the keystone species, which plays a crucial role in maintaining the structure of an ecological community. He has had great impact not only on ecology, but also on conservation biology, as well as on the general public's understanding of biodiversity.

2014 Dr. Philippe Descola

Professor, the Collège de France, France

Dr. Descola, a distinguished anthropologist, has conducted rigorous fieldwork among the indigenous Achuar people living in Amazonia, South America, highlighting their view of nature and activities in interacting with the natural environment. On the basis of his findings, Dr. Descola has developed a philosophical concept and proposed the “anthropology of nature,” which considers nature and culture in an integrated manner.

2015 Dr. Johan Rockström

Executive Derector, Stockholm Resilience Center, Sweden

Dr. Rockström cautioned that we have reached a saturation point in terms of human pressures on the Earth. System, and that if we let these anthropogenic pressures continue increasing to cross the thresholds or tipping points defined as “planetary boundaries,” there is a risk of irreversible and abrupt environmental change.

2016 Dr. Kunio Iwatsuki

Professor Emeritus, Tokyo University, Japan

Dr. Kunio Iwatsuki has continually pursued the goal of biodiversity, and developed plant systematics in an inclusive and multifaceted manner, by adopting not only traditional methodologies but also molecular phylogenetic techniques. He advocated the importance of an integrated understanding of biological classification including phylogenetic systematics. Dr. Iwatsuki has also clarified that this approach is the essential principle which supports the abundance of life forms and harmonious coexistence between people and nature.

2017 Dr. Jane Goodall

Founder, Jane Goodall Institute, UK

Dr. Goodall has been studying wild chimpanzees since 1960 so as to paint a fuller picture of chimpanzees. She has conducted afforestation programs to provide habitats for chimpanzees, and an environmental educational project. She began Roots & Shoots, environmental learning program by young people. More than 150,000 groups are actively working in 99 countries under this program.

2018 Dr. Augustin Berque

Director of studies at the EHESS (École des Hautes Études en Sciences Sociales), France

Profoundly inspired by Fūdo, authored by the Japanese philosopher Tetsurō Watsuji, and by further elaborating, deepening and evolving Watsuji's concept of Fūdo, Dr. Berque organized his own thinking about landscapes and scenery, so as to develop a new academic discipline called "mésologie." Moreover, based on the theoretical results of mésologie, he proposed a theory about the subjecthood of nature, which holds that nature has subjectivity, while critically overcoming anthropocentrism in the nature-culture dualism and environmental ethics.

The International Cosmos Prize Committee

2019.4

Position	Name	Specialty	Official Title
Chairperson	Dr. Kazuo Oike	Geoscience	President, Kyoto University of Art And Design
Vice Chairperson	Dr. Juichi Yamagiwa	Anthropology, Primatology	President, Kyoto University
Member	Dr. Tomoya Akimichi	Ecological Anthropology, Ethno-Biology	Director General, Fujisan World Heritage Center
Member	Dr. Makoto Asashima	Developmental biology	Research Professor, Teikyo University
Member	Dr. Satoru Ikeuchi	Astronomy	Professor Emeritus, The Graduate University for Advanced Studies
Member	Dr. Akira Isogai	Agricultural Chemistry	Professor Emeritus, Nara Institute of Science and Technology
Member	Dr. Kazuhiko Takeuchi	Landscape and environmental science	President, Institute for Global Environmental Strategies
Member	Dr. Tomoko Nakanishi	Radioplant physiology	President, Hoshi University
Member	Dr. Naoko Nishizawa	Plant molecular biology	President, Ishikawa Prefectural University
Member	Dr. Yoshihiro Hayashi	Animal science and resource	Director General, National Museum of Nature and Science
Member	Dr. Izumi Washitani	Ecology , Conservation Ecology	Professor,Faculty of Science and Engineering, Chuo University
Member	Dr. Eitaro Wada	Biogeochemistry	Professor Emeritus, Kyoto University

Position	Name	Specialty	Official Title
Advisor	Dr. Akito Arima	Nuclear physics	Chancellor, Musashi Academy of the Nezu Foundation
Advisor	Dr. Tadamitsu Kishimoto	Immunology	Project Professor, Immunology Frontier Research Center, Osaka University
Advisor	Dr. Keiko Nakamura	Biohistory	Director General, Biohistory Research Hall

The International Cosmos Prize Screening Committee of Experts

2019.4

Position	Name	Specialty	Official Title
Chairperson	Dr. Yoshihiro Hayashi	Animal science and resource	Director General, National Museum of Nature and Science
Vice Chairperson	Dr. Toru Nakashizuka	Forest ecology	Specially Appointed Professor, Research Institute for Humanity and Nature
Member	Dr. Konomi Ikebe	Landscape and Environmental Science	Professor, Graduate School Environmental Science and Landscape, Chiba University
Member	Dr. Kazunobu Ikeya	Environmental anthropology	Professor, National Museum of Ethnology
Member	Dr. Monte Cassim	Environmental Science	President, Graduate School of Leadership and Innovation, Shizenkan University
Member	Dr. Naoki Kamezaki	Animal ecology	Professor, Faculty of Biosphere-Geosphere Science, Okayama University of Science
Member	Dr. Kevin Short	Anthropology	Professor, Department of Environmental Information, Tokyo University of Information Sciences
Member	Ms. Atsuko Tsuji	Science Journalist	Designated Professor, International Collaboration Planning Center, Institute of International Education & Exchange, Nagoya University
Member	Mr. Keiichi Noe	Philosophy of Science	Professor Emeritus, Tohoku University
Member	Dr. Noriaki Murakami	Systematic Botany	Dean, Faculty of Science, Graduate School of Science, Tokyo Metropolitan University