

INTECOL - Bulletin

International Association for Ecology

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Greetings from INTECOL President



Thank you for your help in the past in making INTECOL an exciting and vigorous organization. As members of INTECOL we all have a great opportunity in the years ahead to learn from each other as we continue to collaborate on ecological issues of global concern. We have begun new initiatives under past-president John Lee that we need to continue to develop. Our plans for the next meeting in 2013 are beginning to take form as we strive to support new groups associated with international ecological studies and stimulate synthesis of major concepts. Your suggestions for topics regarding workshops and sessions are most welcome. INTECOL will be meeting with the British Ecological

Society which will be celebrating its 100 year anniversary. We will all want to participate in that important event in London as we help to celebrate a century of history-making contributions to our discipline by that society's members.

I have greatly enjoyed my participation on the INTECOL Board these past 6 years and look forward to serving as your president. The past recent meeting in Brisbane was a great success as reported in the summaries here in this e-Bulletin. We began a discussion of our long-term plans to see how we can remain at the forefront of international ecological research and applications. We are excited that the number of national ecological societies continues to grow and to



connect with emerging groups of researchers that transcend national boundaries. We welcome the active participation in INTECOL by this wide range of organizations and will strive to improve communication, especially through our website and e-bulletin as well as through co-sponsored workshops and smaller meetings at a wide range of venues. As more international research is being organized, it becomes even more essential for INTECOL to help coordinate and communicate among our membership.

In Brisbane, we also reflected on the many students who attended the meeting. Their enthusiasm in participating by helping to organize workshops and field trips and their presentations in many diverse sessions made the meeting a great success. Recognizing that the future of ecology will be determined by this very capable and creative generation of graduate students, the Board recommended that we create a process for selecting a new Board member

from among the current graduate student members to provide additional perspective to our discussions at the upcoming meeting in London. I suggest that the British Ecological Society, our next host society, help us identify that new Board member as soon as possible to begin that participation. We also agreed that it is important to continue to encourage more new graduate student members and we welcome suggestions on how best to do that.

As we move ahead with our plans for 2010 and beyond, please let me know what you would like to see INTECOL do that is complementary to our mission. I welcome your suggestions and look forward to your help and active participation in continuing the progress that INTECOL has made over the years.

Alan P. Covich
President of INTECOL

Profile of Alan P. Covich, INTECOL New President (2009~)

Dr. Alan Covich is a professor of ecology and former director of the Institute of Ecology in the Odum School of Ecology at the University of Georgia, USA. He was the head of Colorado State University's Department of Fishery and Wildlife Biology and served as the assistant chair of the Zoology Department at the University of Oklahoma.

Dr. Covich is the Past-President of the Ecological Society of America (ESA) in 2006-2007. Dr. Covich was president of the American Institute of Biological Sciences in 2000, and president of the North American Benthological Society in 1996. He served as chair of the board of directors of BioOne, a consortium of electronic journals. He was awarded the Icko Iben Award for Excellence (in interdisciplinary work) by the American Water Resources Association in 1997 and elected a Fellow of the American Association for the Advancement of Science in 1999.

Dr. Covich co-edited three editions of the *Ecology and Classification of North American Freshwater Invertebrates* (Academic Press) and published reviews on freshwater ecosystems in *Water in Crisis: A Guide to the World's Freshwater Resources* (Oxford

University Press), the *Encyclopedia of Biodiversity* (Academic Press), and the *Encyclopedia of Hydrologic Processes* (Wiley).

Dr. Covich's research focuses on biodiversity of aquatic ecosystems, and impacts of natural disturbances, such as droughts, floods and hurricanes, on freshwater ecosystem services and food webs. His research interests include assembly and function of stream food webs; predator-prey chemosensory communication; species-specific roles in detrital processing chains; and species redundancy in stream ecosystem functions in temperate and tropical streams. Dr. Covich has recently participated in several international workshops on biodiversity and ecosystem functioning and on effects of climate change on freshwater ecosystems. His recent interdisciplinary project focused on the biocomplexity of food-web dynamics of tropical streams affected by intersecting road and river networks. Dr. Covich participated on the National Research Council review of freshwater ecosystem services and is developing a trans-disciplinary graduate program in ecosystem service valuation.



INTECOL Activities

1. INTECOL Climate Letter

The Climate Secretariat
The Prime Minister's Office
Christiansborg, Prins Jørgens Gård 11
1218 København K, Denmark

To The Organizing Committee;

The International Association for Ecology (INTECOL) strongly endorses and encourages deliberations and actions to address the impacts of climate change globally. Observations throughout the world make it clear that climate change is occurring, and rigorous scientific research demonstrates that the greenhouse gases emitted by human activities are the primary driver. These conclusions are based on multiple independent lines of evidence, and contrary assertions are inconsistent with an objective assessment of the vast body of peer-reviewed science. Moreover, there is strong evidence that ongoing climate change will have broad impacts on society, including the global economy and on the environment. Climate change impacts include sea level rise and inundation of coastal areas, greater threats of extreme weather events, and increased

risk of water scarcity, heat waves, wildfires, and disturbance of biological systems. Furthermore, the Intergovernmental Panel on Climate Change concludes that the severity of climate change impacts is expected to increase substantially in the coming decades.

Founded in 1967 as the Ecology Section of the International Union of Biological Sciences (IUBS), INTECOL represents national ecological societies and organized research programs, together with individual members from 99 countries. INTECOL strongly encourages efforts to dramatically reduce emissions of greenhouse gases, to develop more sustainable management of land, water and other natural resources, and to develop improved infrastructure and agricultural practices to adapt to climate change impacts that are already occurring and will continue to become more frequent and widespread.

We offer our assistance to inform deliberations, clarify uncertainties, and to address the problems of climate disruptions.

Alan P. Covich
INTECOL President

2. INTECOL 10 Congress Statement to COP15 Conference on Climate Change

The International Association for Ecology (INTECOL) calls on delegates at the International Conference on Climate Change (COP15) to consider that the continued loss and degradation of the earth's biodiversity will be made worse by climate change.

The 1300 scientists and resource managers from around the world who met at the 2009 International Congress of Ecology in Australia, spoke of a worldwide collapse of habitats, species extinctions, the spread of pests and diseases, and serious threats to even the most common plants and animals. Many of the almost 1000 presentations provided hard scientific evidence of the impacts of climate change on the world's ecosystems.

The evidence that emerged from the INTECOL Congress demonstrates that strong action at Copenhagen will be needed to avoid the disastrous ecological, social and economic consequences of business-as-usual.

In response we call for delegates at Copenhagen to adopt an ecosystem-based approach in their response to climate change - that specifically identifies projected consequences of biological and human activity on the planet's natural systems and can generate novel solutions to emerging problems. Adaptation and mitigation strategies must result in tangible and sustained co-benefits for biodiversity, people and poverty reduction.



Future of Ecology

Ecological Mangrove Restoration

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Training course on "Mangrove Forest Ecology, Management and Restoration" has been taught over the last 10 years in Florida, Sri Lanka, India, the Bahamas, Jamaica, Nigeria, Thailand and Viet Nam. Approximately 1,000 students have received the training. The course emphasizes the concept of Ecological Mangrove Restoration (EMR) as outlined in several papers including Brockmeyer et al. (1997), Stevenson et al. (1999), Bosire et al. (2008), Lewis (2000, 2005, 2009a, 2009b), Lewis et al. (2005, 2006) and Lewis and Gilmore (2007). This concept emphasizes understanding the ecology and hydrology of the specific target mangrove species to be restored, and allowing for natural colonization of volunteer mangroves after hydrologic restoration. Actual planting of mangroves is only suggested if natural volunteer mangrove colonization does not occur after hydrologic restoration. Included in the course are case

studies of both successful and failed mangrove restoration projects including the failed efforts documented by Samson and Rollon (2008) occurring over the last two decades in the Philippines during which an attempt was made to plant mangroves over an area of 44,000 ha without hydrologic restoration. These failed efforts are estimated to have cost US\$17.6 million. Such failures are contrasted with the successful efforts to restore 500 ha of mangroves in Hollywood, Florida, USA, using EMR at a cost of US\$6 million (Lewis 2005, Lewis and Gilmore 2007).

The 8th annual training course on "Mangrove Forest Ecology, Management and Restoration" will be held in Hollywood, Florida, USA, on 4~ 6 March 2010.

More information can be found at www.mangroverestoration.com

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Meeting Reports

1. INTECOL 10 Congress, Brisbane, Australia

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A highly successful 10th INTECOL Congress was held from 16th-21st August 2009 in Brisbane Australia. Around 1355 people attended the congress from 60 countries.

Plenary sessions

There were ten plenary speakers, with two in the opening session on Monday and four on each of Thursday morning and Friday afternoon. Speakers came from The USA, UK, Sri Lanka, Australia and New Zealand. The last plenary, that closed the spoken program of INTECOL was delivered by David Lindenmayer, the winner of the ESA ERA award.

Symposia and general sessions

722 oral presentations were presented over the five-day program covering a hugely diverse array of ecological topics. There were nine concurrent sessions on offer at all times, and more than half the presentations were in organized symposia, increasing their focus and continuity. One of the strengths of INTECOL is the ability to hear perspectives from researchers from all parts of the globe. Often sessions were like a world tour with speakers from several different continents, and this provided a wonderful opportunity to explore ecological similarities and differences. Many of the sessions reflected the theme of the congress "*Ecology in a Changing Climate*", examining climate change impacts from an ecological perspective in diverse taxa and ecosystems. Other notable themes represented by several sessions were fire ecology, restoration ecology, and impacts of invasive species. One of the most popular sessions was composed of presentations by the most recent ESA and NZES ecology award winners and included simulated volcanic eruptions, and a demonstration of the

importance of pademelons. Thanks to Mike Bull and the scientific program committee for the organizational skills to organize this mass of ideas into a coherent whole.

Poster sessions

There were 428 poster presentations displayed over the week of the Congress in the Exhibition Hall. Poster sessions occurred from 4pm each day but the location of the posters where morning and afternoon teas were held allowed excellent exposure earlier. What better way to enjoy a poster than with a lamington in hand? Drinks were also available during the poster sessions themselves, which helped to fuel lively debate. Again, the broad international representation at INTECOL was evident at the poster session, where studies half a world away were neighbors.

Non-scientific events

This is the first time that public events were associated with an INTECOL congress, and they proved very successful. The Congress was held during National Science Week, which provided opportunities to showcase ecology and INTECOL topics and delegates. Public posters were displayed at the Queensland Museum Southbank for the week of the Congress. In collaboration with Brisscience and the Australian Science Communicators, '*The Science of Sustaining our Urban Landscapes*' at City Hall on Monday night was attended by almost 400 people, including INTECOL delegates, city planners, local and state government representatives, consultants, academics, and many interested members of the public. Again with the Australian Science Communicators, and supported by the Department of Employment, Economic Development & Innovation, BYO Science at



the Plough Inn on Thursday night was so popular that there wasn't enough room on the balcony! Hugh Possingham, Nicola Markus and Stefan Hajkowicz provided food for some lively debates about biodiversity markets and valuing our planet. Unfortunately the Friday night ecological film wind-down was cancelled due to illness of the main star. However, that over 150 people (capacity) returned rsvp's for the event indicated that it would have been a well-attended evening and a great finish to the conference.

Professional development workshops

The INTECOL10 Workshop program comprised 13 different workshops, across three days (15th, 16th and 22nd August, 2009). One 2-day workshop ran on 15th and 16th, four 1-day workshops on 15th, four 1-day and two 0.5-day workshops on 16th, and two 1-day workshops on 22nd. A further workshop (Trends in Journal Publishing) was offered free to all delegates during the main Congress on Thursday evening (20th).

A total of 270 delegates registered for the weekend Workshops. The number of delegates per workshop ranged from 7 to 61, with a mean of 21. The most popular workshops were "Plant functional traits, types and climate change" (61 delegates), "Modelling patterns and dynamics of species distributions" (32), and "How do we record and measure ecological change in a changing climate?" (30).

Media for the congress

19 journalists attended the Congress for periods from a few hours to all five days, with over 50

journalists in total taking an interest in Congress symposia. The Media team from Econnect generated 15 media releases, covering many topics and speakers at the Congress. Some of these topics included:

- Federal Minister for the Environment, Peter Garrett, launches biodiversity report
- Climate change and species movement in Africa
- Ants, snails and scale insects create 'invasion meltdown' on Christmas Island
- 1300 international scientists call for urgent ecological action
- Rainforest to reef - will our protected areas survive?
- Australian mammal extinction crisis

These resulted in 9 radio interviews, 4 television stories, and 361 articles in the print media (293 international). In addition to these, many journalists will develop feature articles from the Congress over the coming months.

Sponsors and exhibitors

The Congress was generously supported by the sponsorship of 15 companies and government agencies, and 16 additional exhibitors. Exhibitors were pleased with arrangements whereby delegates had morning and afternoon tea, and the poster sessions in the exhibition hall.

Climate Friendly Congress

Delegates choosing to contribute an additional \$5 to their registration costs for investment in renewable energy offsets for the use of electricity consumed at the



Coffee break at exhibition hall



All 50 sessions were successful during the INTECOL10. This is one session on Asia Bio-Cultural Diversity



Congress will be pleased to know that the congress offset 112.6 ton of greenhouse gases that would have otherwise been created by the gathering. The funds

were invested through Climate Friendly® (www.climatefriendly.com) in a wind farm project in India.

2. CENTRAL EUROPEAN CONFERENCE: ECOpole'08

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The 17th ECOpole'08 Conference was held near Szklarska Poreba, Poland from 23-25 Oct. 2008, and organized by the Society of Ecological Chemistry and Engineering, Opole, PL. The 135 participants, including delegates representing 14 countries, presented 22 oral contributions and 132 posters. The Polish Ministry of Scientific Research and Higher Education provided financial support to publish the Extended Abstracts and full Conference contributions, as well as to help to pay the fees of the young scientists attending the Conference. ECOpole'08 focused on monitoring the quality of natural environment, its effects on human life, environmental education, and application of renewable sources of energy. The Conference Agenda was divided into 4 sections:

- Session I. Ecological Chemistry and Engineering (Thursday)
- Session II. Environment Friendly Production and Use of Energy (Friday)
- Session III. Forum of Young Scientists and Environmental Education in Chemistry (Friday)
- Session IV. Health, Ecology and Agriculture (Saturday)

The Conference was opened by Prof. Maria Waclawek, Chairperson of the Organizing Committee and Prof. Witold Waclawek, Chairman of the Scientific Board, President of the Society of Ecological Chemistry and Engineering and Representative of the Polish Chemical Society. The opening address was delivered by Prof. Tomasz Winnicki (*National Council of Environmental Protection, Warszawa, PL*).

Prof. Bernd MARKERT (*International Graduate School [IHI], Zittau, DE*) initiated the Plenary Sessions with the lecture: "From biomonitoring to integrated observation of the environment - The Multi-Markered-Bioindication-Concept (MMBC)". Five invited plenary lectures were delivered by Prof. Anton AMANN (*Medical University, Innsbruck, AT*) "Exhaled breath

analysis: quantifying the storage of lipophilic compounds in the human body", Prof. Jerzy BARTNICKI (*Meteorological Institute DNMI, Oslo-Blindern, NO*): "Airborne load of nitrogen to European seas", Prof. Bogusław BUSZEWSKI (*Nicolaus Copernicus University, Torun, PL*): "The application of hyphenated separation techniques in earlier cancer diagnosis - old problems and new facts", Prof. Agáta FARGAŠOVÁ (*Comenius University, Bratislava, SK*): "Phytotoxicity and interactions of chromium and nickel" and Dr. Manfred SAGER (*Austrian Agency for Health and Food Safety, Wien, AT*): "Input of minor and trace elements to soils from fertilization with respect to N and P application".

Very interesting presentations were also given by Dr. Angelika Liermann (*University of Potsdam, Potsdam, DE*): "Energy- and carbon dioxide-balances during the production and utilization of renewable energy", Dr. Mariusz Macherzyński (*University of Science and Technology, Krakow, PL*): "Distribution of Cr, Pb, Cu, Cd and Zn in sediment samples from the Dobczyce dam reservoir (Southern Poland)", Prof. Henryk Matusiewicz (*Poznan University of Technology, Poznan, PL*): "High-resolution continuum source AAS: a better way to perform flame atomic absorption spectrometry using hydride generation technique", Prof. Janusz Szurkowski (*University of Gdansk, Gdansk, PL*): "Application of photoacoustic spectroscopy in studies of environment contamination effect on plants", Prof. Ireneusz Śliwka (*Institute of Nuclear Physics, Polish Academy of Sciences, Krakow, PL*): "Assessment efficacy of international regulations on CFC's and SF6 concentration in the atmosphere of Poland", Prof. Susana Viegas and Prof. Mario Gomes (*Superior School of Health Technologies, Lisbon, PT*): "Environmental monitoring of formaldehyde", Prof. Magnus Vircavs (*University of Latvia, Riga, LV*): "Sediment quality assessment in Latvia water bodies" and Prof. Bogdan Zygmunt (*Gdansk University of Technology, Gdansk, PL*): "Occurrence and



determination of short chain monocarboxylic acids in different wastewaters".

Thursday, a day of hard work, was finished by the Poster Session of the Section Chemical Pollution of Natural Environment and its Monitoring. Many of the discussions begun at the posters lasted until the evening hours. This was followed by a Musical Soirée by the Students of the Public Musical School in Jelenia Gora (Chamber Band, Accordion Quartet and Big Band) who played classical and contemporary compositions. The audience applauded the players and asked for more, and then attended a Conference Dinner.

Friday started with an ecological excursion. The participants had a chance to visit the air pollution monitoring station in Cieplice Zdroj, near Piechowice - situated in the former so-called Black Triangle region (of total area of 34 500 km² and with a population of 6.25 million). The excursion was introduced by a computer presentation delivered on Thursday by Mgr. Lucyna Polańska (*National Inspection of Environmental Protection, Jelenia Gora*): Assessment of air quality in Jelenia Gora region. We could hear and see how its huge environmental problems of this region were being solved.

As usual during the ECOpole Conference, the second day included the Session of the Young Scientists (a forum of young scientists that present and discuss local ecological problems of their countries). Thirty-one posters were presented during the Young Scientists', Environmental Education and Renewable Energy

Poster Session. The Scientific Board granted awards (sponsored by the Society of Ecological Chemistry and Engineering) for the best presentations. The awards for poster presentations were given to Ł. Gałczyński (*Czestochowa University of Technology, Czestochowa, PL*): How people use microalgae?, J. Hoffmann, K. Hoffmann, M. Borowiec, M. Huculak and J. Baran (*Wroclaw University of Technology, Wroclaw, PL*): Study of the possibilities of utilization wastes from phosphorus compounds factory in mineral-organic fertilizers and M. Rebola, M.J. Silva, H. Louro, A.M.M. Antunes, S. José, M.H. Rebelo and A.S. Cardoso (*Portuguese National Health Institute, Lisbon, PT*): Chlorinated polycyclic aromatic hydrocarbons associated with drinking water chlorination - preparation, quantification and genotoxicity characterization. The conclusion of the Friday scientific agenda was a Grill Party.

The third day was dedicated to the impact of environment food and pollution on human health. After two very interesting plenary lectures delivered by Prof. Anton Amann and Prof. Bogusław Buszewski, the last Conference Poster Session came up. Prof. Maria and Witold Waclawek then made short recapitulations of the main points of the meeting and the session closed.

The approved peer-reviewed papers will be published in the journals *Ecological Chemistry and Engineering A* and *S* and distributed to all participants. The Extended Abstracts of the presentations will be published in the semi-annual *Proceedings of ECOpole*.





Meeting & Congress

1. *International Conference in Landscape Ecology*

Organized by Czech Chapter of IALE, Brno-Prague, Czech Republic (3-6 September 2010)

"Landscape structures, functions and management: *Response to global ecological change*"

Main topics

1. Global climate dynamics: challenge for conceptual work in landscape science.
2. Economy convergence of nature and society under the induced climate pressures and landscape changes.
3. Monitoring as a tool of knowledge basis about landscapes and processes. Historical human-made landscape changes and future scenarios.
4. Landscape geo-biodiversity and indicators of global ecological change.
5. Ecological planning, landscape management and green networks in areas of different climate zones.
6. Forest- and agro-ecosystems: adaptive management approaches.
7. Natural and restored landscapes: their functions/services as subjects of problem-oriented science.
8. Open land for food and/or energy production: How to solve interferences with the goals of nature protection?
9. Adaptations and functional water management by land use change.

For further information, please visit <http://icle2010.dnh.cz/en/welcome>

2. *The 4th EAFES International Congress*

Kyungpook National University – Sangju Campus, Korea (13-17 September 2010)

"Ecological Challenges and Approaches for Regional Green Growth: *Living harmoniously with nature*"

EAFES is the East Asian Federation of Ecological Societies composed of Ecological Society of China (ESC), Ecological Society of Japan (ESJ), Ecological Society of Korea (ESK), International Long-Term Ecological Research East Asia-Pacific Regional Network (ILTER-EAP) and Society of Subtropical Ecology (SSE). There will be a range of plenary lectures, symposia, and workshops to illustrate the theme, together with other activities on diverse ecological topics.

For further information, please visit <http://www.eafes-sangju.org/>

3. *Invitation for ECOpole'10 Conference*

Lower Silesia, Poland (13-16 December 2010)

"Chemical Substances in Environment"

The Conference Programme includes oral presentations and posters and will be divided into five sections - SI - SV:

1. SI. Chemical Pollution of Natural Environment and its Monitoring
2. SII. Environment Friendly Production and Use of Energy
3. SIII. Risk, Crisis and Security Management

4. SIV. Forum of Young Scientists and Environmental Education
5. SV. Impact of Environment Pollution on Food and Human Health

Contributions to the Conference will be published as:

- abstracts on the CD-ROM (0.5 page of A4 paper sheet format)



- extended Abstracts (4-6 pages) in the semi-annual journal *Proceedings of ECOpole*
- full papers will be published in successive issues of the *Ecological Chemistry and Engineering/Chemia i Inżynieria Ekologiczna* (Ecol. Chem. Eng.) ser. A and S.

For additional information one could find on the Conference website: ecopole.uni.opole.pl

The deadline for sending the Abstracts is 15 July 2010 and for the extended abstracts: 1 October 2010.

Further information is available from:

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Chairperson of the Organizing Committee of ECOpole'10 Conference, Opole University

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4. The 53rd Symposium of the International Association for Vegetation Science

Ensenada, Baja California
México (18-23 April 2010)

The main theme of the symposium will be “*Changing Gradients in Vegetation and the Environment*”. Contributions on a subject related to these topics are welcome. Papers may be presented orally or as posters. The second circular will contain more details on the topics and subtopics of the Symposium, as well as details concerning the submission of abstracts.

Organization: Biodiversity Research Group, Faculty of Science, Universidad Autónoma de Baja California, International Association for Vegetation Science

The actualized list (and the Abstracts) of the Conference contributions accepted for presentation by the Scientific Board, one can find (starting from 15 July 2010) on the Conference website.

The papers must be prepared according to the Guide for Authors on Submission of Manuscripts to the Journals. At the Reception Desk each participant will obtain a CD-ROM with abstracts of the Conference contributions as well as Conference Programme (the Programme will be also published on the Conference website).

Contacts 53rd IAVS Symposium Secretariat:

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INTECOL, International Association for Ecology

INTECOL is affiliated with the ICSU family of scientific organizations as the section responsible for general ecology within the International Union of Biological Sciences (IUBS). The association will assist and/or support the development of the science of ecology and the application of ecological principles to global problems, especially by assisting international cooperation; the collection, evaluation and distribution of information about ecology; national, regional and international actions which will serve ecological research, training of personal, coordination of general publications of ecological principles and the recognition of the importance of ecology for economy and society; the organization of conferences, meetings, symposia, programs and projects, conduct of speaking-series, publication of manuscripts, and measures which are deemed necessary to reach the goals of the association.

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Deadline for sending information for next e-Bulletin

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