

International Aerobiology Newsletter



Newsletter of the International Association for Aerobiology

Bernard Clot IAA President



Dear colleagues and friends,

In one year, aerobiologists and colleagues from related sciences from all around the world will meet in Parma, Italy, on the occasion of the 11th International Congress on Aerobiology ICA2018. This is a major event in our discipline and I am already looking forward to meeting all of you there! Roberto Albertini is planning a really outstanding event, both from a scientific and a social point of view. In addition to the congress, several important business meetings will also take place.

Important announcements in relation to the Life of the Association - All members are invited to take part in the quadrennial General Assembly of the IAA that will take place during the ICA2018 in Parma, 3-7 September 2018.

To refresh our minds with the procedures in use and be prepared for the Assembly, please read the Statutes and Rules of Procedures that are published on the IAA web-page. In particular, note that in accordance with Art.13 of the Statutes, the annual fees have to be paid in order to have the right to vote at the Assembly. To make this practicable, the members should pay their 2018 fees before the end of June 2018. IAA membership fees are not expensive, especially as important reductions for

Congress registration fees are offered (pay attention to the registration deadlines)!

You are also invited to become active in the Association and submit proposals for Working Groups, Commissions, etc. (according to the Statutes, Art. 5) to the President before the end of February 2018. Please see the separate announcement concerning the organisation of the Congress in 2022.

A second life for Hirst traps - Some colleagues need support in acquiring Hirst-type traps to start monitoring. If you have a trap that is not used, and you would like to offer it a second life in a part of the world where aerobiological data are rare, please contact me (Bernard.Clot@meteoswiss.ch) and I will put you in touch with the interested parties.

I wish you all a fruitful, happy and successful second part of 2017 and look forward to hearing good news from your researches and projects.

Bernard Clot

Message from the editor...

A very warm welcome to this, the 82nd issue of the IAA Newsletter. It only seems like yesterday that I was preparing the last issue, but it has been a busy few months and as always I am indebted to friends and colleagues for keeping us up-to-date on recent developments in aerobiology.

For me, the highlight of the last few months had to be the European Course on Basic Aerobiology that was held in the University of Gothenburg's marine research station at Kristineberg, part of Sven Lovén Centre for Marine Infrastructure. It was an absolute joy being able to teach such enthusiastic participants in such a fantastic venue, and I would like to thank all those involved for making it such a memorable experience.

The Basic Course was organised by Áslög Dahl and delivered under the auspices of the European Aerobiology Society. This was by no means the only training school undertaken recently, and Dr. B. E. Rangaswamy has sent a short report about the National workshop on Aerobiology that was held at the Bapuji Institute of Engineering Technology in India.

Scientific meetings give us the opportunity to get together and exchange ideas, and Łukasz Grewling has written brief review of the

Polish Aerobiological Symposium that was held at Adam Mickiewicz University in Poznań. Bernard has already taken the opportunity to remind us about ICA2018, which is rapidly approaching. Roberto Albertini has provided some additional information about the congress, which you'll find on pages 8 & 9. The website of ICA2018 is now live, and you can keep informed about this important even by going to www.ica2018.eu.

There are also some other training courses and scientific meetings planned for 2018, and I have included information about a few. Of course, scientific meetings would be rather dull if we didn't have the opportunity to hear about the latest research, and Branko Šikoparija brings us news of the exciting RealForAll project.

I'm already on the lookout for material for the next issue (83, December 2017), so let me know if you have something you would like to share with the aerobiological community.

Best wishes

Matt Smith, IAA Newsletter editor

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News from *Aerobiologia* the official journal of the IAA

The latest impact factors have been released and 2016 shows quite a hefty increase for *Aerobiologia* (2016 IF 2.202) compared to the previous year (2015 IF 1.452).

The International Journal of Biometeorology is another Springer journal where aerobiologists regularly publish, and readers might be interested to know that the 2016 IJBM impact factor is 2.204 (2015 IF 2.309). The journal is currently celebrating 60 years of the International Society of Biometeorology and International Journal of Biometeorology, and the anniversary has been marked by a special edition that includes an article by Beggs et al. (2017) entitled "Aerobiology in the International Journal of Biometeorology, 1957–2017": <https://link.springer.com/journal/484/61/1/suppl/page/1>

The 2016 impact factor for *Grana*, published by Taylor and Francis, is 1.085.

References

Beggs PJ, Šikoparija B, Smith M. Aerobiology in the International Journal of Biometeorology, 1957–2017. *International Journal of Biometeorology* 2017; 61: 51–58.



National Workshop on Aerobiology “Applied Biotechnology-Hands on”

Department of Biotechnology, Bapuji Institute of Engineering Technology, Davangere, Karnataka-
India, 16-22 January 2017

Dr. B.E.Rangaswamy

A total of 45 undergraduate and post graduate students of Biotechnology from different institutes participated in the Workshop on Aerobiology held at Bapuji Institute of Engineering Technology. Dr. B.E.Rangaswamy, Prof. Prakash K.K, Prof. Vinay Kumar and Ms. Seema Yogitha were the persons involved.

During the workshop two days were set aside for demonstrating air sampling techniques by using different samplers like the Anderson sampler, Burkard sampler, Merck sampler, Bertin-Coriolis sampler, Bohems etc., as well as the preparation of media and slides for microscopic study, calculations, and microphotography.



Dr. B.E. Rangaswamy enthusiastically interacts with students during the workshop



Allergy School on Aerobiology and Pollution in Croatia, 15-17 March 2018

Organizing by the Interest Group Aerobiology & Pollution of EAACI together with the IG Infection & Allergy.

The school features experienced speakers, aerobiological sessions and others, some practical courses, and social activities. We like the technical aspects of performing, and the interpretation of data from pollen, molds, pollen traps, airborne allergens, microbiome and much more!

EAACI is sponsoring this event and the costs for EAACI members is low i.e. €250 for junior members (aged <35 years), €350 for regular members and €500 for non-members. Becoming a junior member is free of charge :

<http://www.eaaci.org/organisation/eaaci-membership.html>

In this registration lodging and (most) food is included, with of course the registration fee. Participation is limited to about 60 individuals.



Icing on the Hirst trap

Bernard Clot, Stéphane Vincent and Jean-Michel Cornuz

MeteoSwiss, Payerne, Switzerland

In this short contribution, we aim to draw the attention of the aerobiological community to a possible obstruction of the inlet of the Hirst trap, particularly in wet and cold weather conditions. While planning a monitoring campaign on the Weissfluhjoch (altitude 2692 m), and taking advantage of experiences from previous campaigns at Gütsch (2287 m) (Gehrig and Peeters, 2000), we modified a Hirst-type trap (Burkard Manufacturing) with a heating system for the head of the trap.



The first test was conducted on the roof of MeteoSwiss building in Payerne. The pictures above were taken early in the morning of February 15th 2017, and show the icing of the inlet of the trap.



Two standard Hirst-traps were iced and the heated one was not. Obviously, the weather conditions on this February morning (T° between -1 and -2° C and $rH > 90\%$) were not particularly favourable for pollen emission and airborne dispersion. However, there is a clear risk of reduced monitoring efficiency in certain conditions and should be considered for studies in cold and humid areas.

Pictures by S. Vincent.

References

R. Gehrig and A.G. Peeters. 2000. Pollen distribution at elevations above 1000 m in Switzerland. *Aerobiologia* 16: 69–74.

SMARTER website & extranet moved to IRS

The websites of European COST Action SMARTER for the Sustainable management of *Ambrosia artemisiifolia* in Europe have been moved to the web server of the International Ragweed Society (IRS):

Website: <http://ragweed.eu> --> <http://internationalragweedsociety.org/smarter/>

Extranet: <http://ragweed.eu/extranet/> --> <http://internationalragweedsociety.org/smarter/extranet/>

Everything should work as in the past, and all registered Users should still be able to access and edit contents.

The old domain name ragweed.eu will be discontinued. Anybody interested to take over the old domain name can contact the Webmaster Christian Ries - cries@mnhn.lu

The webmaster of IRS is

Mr Gilles OLIVER

gilles.oliver@rnsa.fr

RNSA – Aérobiologiste – www.pollens.fr

EAS – Webmaster – www.eas-aerobiology.eu

The 10th European Palaeobotany and Palynology Conference

Dublin, Ireland from 12-17 August 2018

The website for EPPC2018 has now been launched: <http://eppc2018.ie>

The theme for EPPC 2018 'A Multidisciplinary Science' seeks to

highlight multi- and inter-disciplinarity in palaeobotanical and palynological research, past, present and future. The conference organisers aim to showcase disciplinary diversity in palynological and palaeobotanical research through themed and open sessions, via demonstrations of new technology platforms in a dedicated exhibition space and during post-conference field excursions.

The call for abstracts will open in October 2017, with a **February 2018 deadline**.



International Ragweed Society



EUROPEAN
PALAEOBOTANY
& PALYNOLOGY
CONFERENCE



RealForAll: Real-time measurements and forecasting for successful prevention and management of seasonal allergies in Croatia-Serbia cross-border region (project ID: HR-RS151)

Branko Šikoparija

Exposure to aeroallergens is associated with allergic rhinitis and asthma that significantly reduce quality of life and have a notable economic impact on society in the Croatia-Serbia cross-border region (Fig.1). Numerous sources of airborne allergenic pollen are present in the region, resulting in exposure to strong allergens (e.g. birches, grasses, common ragweed) on both sides of the border.

(1-7 days old). Such data, from a public health point of view, can only be used for retrospective observational analysis and strategy development. In order to be of use for improving the quality of life in the pollen sensitive population, public health systems in the region should provide real-time measurements of atmospheric pollen concentrations and forecasts, as seen in the case of meteorology and airborne pollutants where assimilation of real-time data is necessary to increase the performance of atmospheric models.



Figure 1. Map showing Croatia-Serbia cross border region

Information on exposure risk is a prerequisite for preventing symptoms and managing allergic disease. In order to support life with allergies and the self-management of symptoms, such information needs to be provided and disseminated to end users in time. There is a long-term awareness of the importance of aerobiological data in the Croatia-Serbia cross-border region and a well developed network of aerobiological stations i.e. Croatia (Osijek, Našice, Beli Manastir, Slavonski Brod), Serbia (Novi Sad, Sombor, Vrbas, Sremska Mitrovica, Loznica). This monitoring started more than 15 years ago, but the applied methodology using volumetric spore traps of the Hirst design only provides past data

Sources of airborne allergenic pollen are distributed on both sides of the Croatia-Serbia cross-border region. After emission, pollen is transported by air masses over national borders and thus can have adverse health effects not only locally but in the entire cross-border region. This requires a joint approach in monitoring and free access to data and information. A consortium consisted of BioSense Institute - Research Institute for Information Technologies in Biosystems (Serbia), University of Novi Sad Faculty of Sciences (Serbia), University of Osijek (Croatia), City of Osijek (Croatia) has been established to implement the RealForAll project (15th July 2017 to 14th January 2020). The main objective is to enable public health system to fulfil a role in assisting successful prevention and management of allergic reactions resulting from exposure to allergenic airborne pollen in the Croatia-Serbia cross border region. To achieve this, RealForAll will modernize public health services in the region and notably enhance the quality and applicative value of the information they provide: by introducing real time monitoring of airborne allergens, by developing models for predicting exposure and by creating a joint platform for instantaneous dissemination of the information. In addition, the project will make an effort to educate end users on the benefits from using aerobiological information for prevention and management of allergy symptoms.

A network of devices for real-time measurements of airborne pollen concentrations is expected to have a notable impact on aerobiological research, not only regionally but also on a European scale. The RealForAll project is co-financed by the Interreg IPA Cross-border Cooperation programme Croatia – Serbia 2014-2020.

Interreg - IPA CBC
Croatia - Serbia



European Basic Course in Aerobiology

Fiskebäckskil, Sweden, 17-24 July 2017

Matt Smith, with contribution from Letty de Weger (EAS Secretary)

The 13th European Course in Basic Aerobiology was held in Fiskebäckskil on the West Coast of Sweden. The course venue, the marine research station Kristineberg, is part of Sven Lovén Centre for Marine Infrastructure. It is situated in the western outskirts of the picturesque fishing village of Fiskebäckskil, on the island of Skaftö by the Gullmar Fjord. The area is characterised by small-scale agriculture, green pastures and meadows, and oak forest groves on shell rich ground that are rich in wildlife (as the author can attest).

The course was attended by 16 participants from different countries around Europe and some from as far away as Brazil and Japan. The course was a joint collaboration between the European Aerobiology Society (EAS), University of Gothenburg, and Gothenburg Centre of Air and Climate (GAC). It included a range of lectures related to sampling, analysing and modelling aeroallergens, as well as their health impact, and practical sessions for the identification of

common pollen and fungal spore types. Since the EAS wants to encourage young researchers in Aerobiology, it granted €1500 to the Local Organizing Committee, under the direction of Åslög Dahl, to support the costs of participation for EAS members that supplied a funding request.

There was also a busy social programme, and one day (in the middle of the course) was set aside to a tour in the beautiful province of Bohuslän, with a world-heritage of Bronze Age rock carvings, and Nordens Ark, a zoological park focusing on the preservation of species under the threat of extinction, and aiming at reintroducing animals to the wild. There was also time to explore the local area, or just relax on the terrace of the research station and take in the idyllic views. I am sure everyone concerned will join with me in thanking Åslög for organising such a successful course!



Smiling lecturers and participants on the 13th European in Basic Aerobiology. Probably the only day the sun didn't shine!

EUGIC 2017

2nd European Urban Green Infrastructure Conference, 29-30 November 2017 Budapest, Hungary

This conference may interest aerobiologists who have a focus on urban green spaces. Participants and leading urban greening experts will meet in Budapest to celebrate nature-based solutions – planners, policy makers, ecologists, architects, landscape architects, engineers, developers and investors, constructors and facilities managers. More information can be found by following the link: <http://eugic.events>





ICA2018



11th International Congress on Aerobiology
3 - 7 September 2018, Parma, Italy

ADVANCES IN AEROBIOLOGY FOR THE PRESERVATION OF HUMAN AND ENVIRONMENTAL HEALTH: A MULTIDISCIPLINARY APPROACH

The 11th International Congress on Aerobiology will be glad to welcome you to Parma (Italy),
an elegant city full of charm, where you feel the lovely atmosphere of a little capital



TOPICS

AGRICULTURAL APPLICATIONS OF AEROBIOLOGY, PHENOLOGY: Pollen charge & fruiting; fungal spores monitoring & pathogenicity prevention; aerobiological indicators

ALLERGENS, ORGANICS, ORGANISMS: Pollen, fungal spores, mites & animal dander products, latex, molecular aerobiology, toxins, bacteria, viruses, algae, volatile organic compounds

CULTURAL HERITAGE: Bio-deterioration, preservation

ENVIRONMENTAL AEROBIOLOGY: Air pollution, global change, land management - urban design- green cities, meteorology, climatology, spatial dynamics & spatial representativeness

FORECASTING AND MODELLING: Statistical & deterministic modelling, atmospheric dispersion, inter-annual variation & trends, short-term forecasting, climate impact & climate sensitivity

FUNDAMENTAL MECHANISMS: Release, dispersion, transport, long distance transport, deposition

GENERAL AEROBIOLOGY: Citizen science, history & development of aerobiological studies, media communications & health literacy, public information, outreach

HEALTH IMPACT: Asthma, rhinitis, conjunctivitis, pollinosis, epidemiology, prevention, diagnosis, therapy, specific immunotherapy, diagnostic & therapeutic pathways, thresholds, cross reactivity, occupational allergy, aerobiology-sport-allergy, allergy & immigration, co-exposure allergens & pollution, pollen-food allergy syndrome, direct & indirect sanitary costs

INDOOR AEROBIOLOGY: Public & private buildings, farms & industries, healthcare setting, operating theatres, cleanrooms, spacecrafts

INVASIVE RAGWEED SPECIES IN EUROPE: Ecology, impact & management

MOLECULAR AEROBIOLOGY: Allergens, airborne organisms, genetics

MONITORING, SAMPLING AND IDENTIFYING: Pollen, fungal spores, bacteria, algae, survey networks, quality control, norms & standards, new methods, bioterrorism, automation

PALYNOLOGY: Archeopalynology, melissopalynology, paleopalynology, palynology, forensics

REGISTRATION FEES are in Euro; VAT rate calculated on the basis of the current taxation upon payment settlement.

REGISTRATION FEES (VAT 22% deducted AT PRESENT RATE)

CATEGORIES	EARLY BIRD	LATE BIRD	ON SITE
	Within May 15th	Within June 15th	After June 15th
Registrations IAA, AIA, POLLnet Members	€ 380 + VAT	€ 480 + VAT	€ 540 + VAT
Registrations EAS, PAAA, AAA, IRS Members	€ 410 + VAT	€ 510 + VAT	€ 570 + VAT
Registrations NON MEMBERS	€ 460 + VAT	€ 560 + VAT	€ 620 + VAT
Registrations STUDENTS	€ 240 + VAT	€ 300 + VAT	€ 360 + VAT
EXTRA FEE			
Conference visit and Social Dinner (WEDNESDAY evening)	€ 100,00 (VAT 10% included)	onsite not available	
ICA Food Valley visit	€ 75,00 (VAT 22% included)	onsite not available	

Registration fees include: Participation in the scientific sessions, Abstract book and Final Program of the congress and materials, Lunches and coffee breaks (as per program), Opening Ceremony and Welcome Reception.

Please note that the Conference visit and Social Dinner (WEDNESDAY evening) and ICA Food Valley visit (FRIDAY afternoon) are not included in the registration fee and have to be added.

On site payment will exclusively be VAT included.

MEMBERS: to register as a member it is necessary to be a member of one of the mentioned association and to have renewed the membership for the year 2018. Participants who registered at ICA that are not in compliance with the payment of relevant membership fee of the association for the year will be asked to settle the difference between members and non-members ICA registration fee.

NON MEMBERS: Registration fee for anybody not part of the above mentioned association.

STUDENTS: Students and PhD students up to 31 years old benefit from a discounted fee. Students must provide a certificate attesting their status for 2018 together with copy of an ID document along with the registration form.

EXTRA FEE: Guided visit and Conference Dinner on Wednesday 5th Sept to be purchased at the moment of the registration. Guided visit at the discover of Parma treasure and Conference Dinner €100,00 per person (VAT 10% included)

Take a break from the Conference and stretch your legs and have a guided visit through Parma and its unique art treasures which will pleasantly surprise you. The guided visit will culminate with the Social Dinner in a charming location with excellent local foods and wine. Relax after a long, stimulating week of talks and networking.

EXTRA FEE: ICA optional Food Valley visits on Friday 7th Sept to be purchased at the moment of the registration. Half day visit at the discovery of roads of wine and flavor visit in the countryside, transportation by bus, English speaking guide € 75,00 per person (VAT 22% included). *On this tour you'll experience one of the most delicious foods in the world such us Parmesan cheese and ham tasting the wine and savor the excellent products of Parma.*

**STAY TUNED: www.ica2018.eu
MV Congressi - ica2018@mvcongressi.it
Tel. +39-0521 290191 Fax. +39-0521 291314**

Polish Aerobiological Symposium

Faculty of Biology of Adam Mickiewicz University (AMU), 2nd June 2017

Łukasz Grewling

On a sunny Friday morning in June, a vigorous, enthusiastic and pollen-orientated group of people met in Poznań, Western Poland, for the Polish Aerobiological Symposium. The Symposium was hosted by three collaborating units: Laboratory of Aeropalynology, Department of Plant Taxonomy and Laboratory of Biological Spatial Information. The meeting was a continuation of a conference series regularly organized over the last 20 years in Poland. This year, the conference was focused on the broad aspects of aerobiology, starting from structural analysis of allergenic proteins and ending on spatial geoinformatic analysis of pollen transport in the air.

More than 60 people (researchers, students, and physicians) came to Poznań to share their knowledge, experience and the latest research findings in the field of aerobiology. There were almost 30 oral presentations been given during the meeting grouped in three sessions: (1) Molecular Aerobiology, (2) Environmental Aerobiology, and (3) Spatial Aerobiology.

The first session focused on the detection and identification of aeroallergens using molecular analysis, e.g. DNA-based detection, ELISA and spectroscopic methods. Extremely interesting lectures about release mechanisms of microbial fragments and structural analysis of Alt a 1 were the major emphasis of the morning session. The next session gathered allergists, phenologists and plant ecologists who talked about the nature of allergic skin disease, the role of airborne allergens in atopic dermatitis, and investigated the complex variations of aeroallergens in outdoor and indoor environments, e.g. salt chambers.

The last session focused on the application of Geographical Information System (GIS) in aerobiological studies. This was linked to the GIS workshop (3rd June 2017) organized within the VI BioGIS Forum. GIS computer workshops are organized every year by the Laboratory of Biological Spatial Information at the Faculty of Biology AMU in Poznań, and are a forum for sharing ideas of GIS application in biological science. It was a great opportunity to learn new skills and broaden our scientific horizons. We believed that all sessions were filled with interesting and novel lectures, and the meeting provided many unforgettable moments, fruitful talks and great opportunities for future collaborations.



BioGIS workshops on the 3rd June 2017

It is worth noting that the Symposium was connected to the beautiful photography exhibition of A. Wojciechowska dedicated to the extraordinary nature of Nicaragua. On behalf of the organizers of the Symposium, I would like to thank all the delegates for their active participation and the convivial atmosphere during the whole conference... including an excellent evening party in the floral Botanical Garden.



Social meeting at Botanical Garden

Congresses of the International Society for Human and Animal Mycology (ISHAM)

Amsterdam, The Netherlands, 30 June - 4 July 2018

Congresses of the International Society for Human and Animal Mycology (ISHAM) are only held every three years and provide clinicians, scientists and students an exciting opportunity to meet at an international forum dedicated solely to the study of medical mycology. The 20th ISHAM will be co-hosted by the Netherland Society of Medical Mycology (NVMMy). More information can be found on the ISAM2018 website:

https://www.isham2018.org/en/Home_10_6_12.html

The abstract submission will open as of September 1st, 2017.
Deadline individual posters & orals: 1 February 2018.



Inaugural Professorial lecture of Prof. Carsten Ambelas Skjøth

University of Worcester, 24th May 2017

Carsten Ambelas Skjøth has become a Professor in Atmospheric Sciences at the University of Worcester. He moved from Scandinavia to Worcester in January 2013 as a senior lecturer and now leads an active research group working on atmospheric science and airborne pollen and spores. In his inaugural Professorial lecture "*How the Internet of things will revolutionize forecasts of airborne pollen, spores, and plant diseases, improving agriculture and human health*", Carsten demonstrated how rapidly developing technologies are currently revolutionizing our understanding of the biology of the air and its impact on environment, globally as well as locally. He highlighted knowledge gaps and discussed how "the internet of things" will soon transform services, thereby benefitting agriculture, human health and ecosystems.



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