

## ISBE conference Review

### Behavioral Ecology Surfaces in Finland: ISBE 2004

*“When I first visited the University of Oulu, Finland, in 1983, behavioral ecology was an underground science.”* This startling statement (by Dov Lank) brought to an abrupt halt the conversation on the finer and possibly embarrassing points of sauna etiquette that the four of us had been carrying on. Along with our luggage and a variety of perspectives, we were crammed into a rented Citroën C3, chugging across Finland on the way to ISBE2004. Two of us (DL & Ron Ydenberg) were veterans with a long association with behavioral ecology and with Finland, while two (Kim Mahot & Andrea Pomeroy) were graduate students making their first visit to a major international conference. Two were male and two female. Two knew everybody (or thought they did), and two were neophytes who knew nobody (or thought they didn't).

Our tiny car provided a useful if somewhat intimate opportunity to anticipate (during the drive to Jyväskylä) and reflect on (drive back to Helsinki) the ISBE experience, inspired by the landscape of forests and lakes in the lingering northern twilight of the land of Sibelius.

As graduate students in a large and active behavioral ecology group KM & AP looked dubious. *“Underground science!!!?” “Bizarre, but true.”* DL continued. *“Students at Oulu would lock their doors and draw the curtains to pore over forbidden texts on optimal foraging, kin selection and parent-offspring conflict. They had to be furtive because Erkki Pulliainen, Head of the Zoology Department, did not believe that the kinds of questions posed by behavioral ecology could be addressed scientifically. He got into a major argument about this with a bright graduate student, who subsequently left Oulu and finished his PhD at the more sympathetic University of Uppsala.”*

Twenty-four years after defending his thesis, Rauno Alatalo, now a Finnish Academy Professor, led a local committee including Johanna Mappes, Janne Kotiaho, and Hannu Ylönen in organizing our society's fabulous 10th biennial meeting, ISBE2004, in Jyväskylä, Finland.

This meeting was marked by professionalism, attention to detail, and innovation in every regard, including web-based registration, abstract and talk submission - about half of the 330 talks were submitted in advance. The superb lakeside Jyväskylä “Paviljonki” conference center included space to

display all 400+ posters for the entire meeting, rooms for plenaries, five concurrent paper sessions, as well as a lunch and banquet facility. Most hotels were located conveniently nearby. In spite of the closure of the Jyväskylä airport, more than 910 persons registered, well up from the 700+ two years ago in Montréal. Attendees were skewed towards the young (mode 30–34), particularly so for females, if the age distribution sampled from 118 persons in a lunch line provides a representative sample (Fig. 1). The central network for receiving and distributing presentations worked near-perfectly (a few videos were apparently lost in Mac-PC conversion), and the projection facilities were great. Andy Horn looked back at a full-frame picture of a ca. 8 m high tree swallow looming behind him and claimed to feel like the incredible shrinking man.

Despite thematic organization of the paper sessions at conferences, substantial fractions of the audience move between sessions. The program listed the titles of all 5 sessions on facing pages, allowing for rapid planning and execution of one's movements. (A trade off of this compact format was that only each paper's presenter could be listed in the program - even when not the first author. However, the excellent indexing and cross-referencing of the Program and Abstract booklets more than made up for this.) As of this writing, the meeting's program is still available on line at [www.ISBE2004.com](http://www.ISBE2004.com).

Those who think our field remains dominated by sexual selection in birds may pursue their complaints. Indeed, few facing pages of the Abstract book lack at least one talk on birds. However, a closer look at this program - or at recent issues of “Behavioral Ecology” - shows that the taxonomic and subject diversity of the field is increasingly diverse. The organizers capitalized on this with their choices of plenary speakers, whose well-attended presentations covered spiders and their webs as behavioral adaptations (Fritz Vollrath), explorations of intra-colony kin conflict in ants (Lotta Sundström); the continually evolving mechanism responsible for the maintenance of behavioral/color morphs in male and female fence lizards (Barry Sinervo); the potential utility of individually-based models for conservation (William Sutherland); the higher power potentially obtained by using

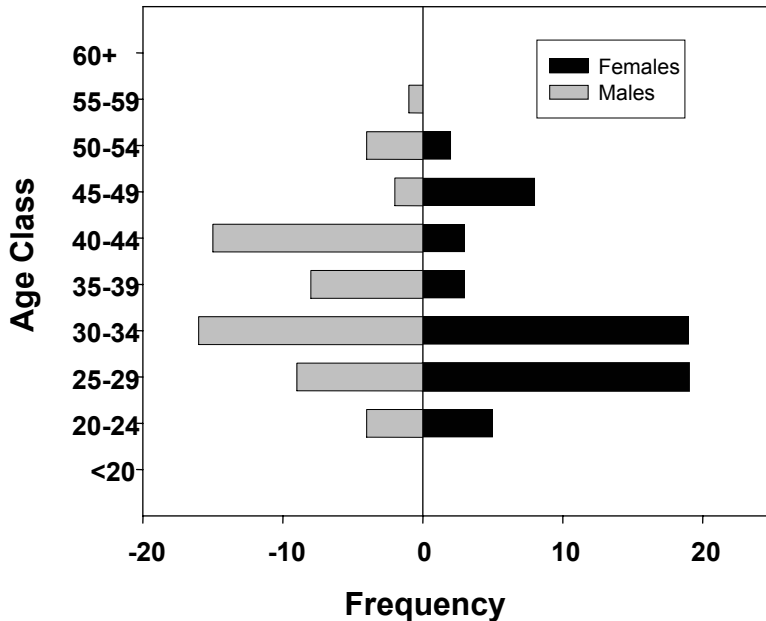


Figure 1. Age distribution of behavioral ecologists attending ISBE 2004.  $n=58$  males, 58 females, sampled in Thursday's lunch line at the conference center.

molecular data to reconstruct pedigrees rather than analyzing effects of indexed relatedness (Josephine Pemberton); the role of MHC genotype with respect to mate choice in sticklebacks (Manfred Milinski); and, yes, one on birds (but not sexual selection), when Vladimir Pravosudov described his elegant work on spatial memory and food caching in tits and jays.

The Hamilton lecture was most appropriately presented by Mary Jane West-Eberhard, spiced with personal stories including a description of a dinner she arranged between Robert Trivers (the Hamilton lecturer in 2002) and William Hamilton in her Cambridge apartment, circa 1970. She developed her view that phenotypic plasticity, including behavior, is paramount in guiding the evolution of developmental mechanisms on which natural selection acts, and must be considered as leading evolutionary change, rather than being simply a consequence of selection on genetic variation.

Few scientific presentations elicit gasps from the audience, but this happened twice during Keita Tanaka's presentation of videos showing a Horsfield's hawk cuckoo nestling on the slopes of Mt. Fuji. This cuckoo has found a novel solution to the problem of extracting higher rates of resources from its hosts, despite being a brood of size one, after having evicted the host young. The nestling flashes at the nest

attendants triangular patches on the underside of the wing that mimic its own gape. The parents try to feed the patches! This is not simply natural history; "experimental invisibility" of patches reduced parental feeding rates, supporting their hypothesized function.

Nor was this the only innovation we learned about at this meeting. We are thrilled to announce that the perennial problem of keeping paper sessions in synchrony at scientific meetings has been brilliantly solved by the ISBE2004 organizers. As at earlier ISBE meetings, speakers were alerted to the approaching time limit by playbacks of animal sounds. At 13 minutes the melodious call of a scarlet rose finch was broadcast throughout the conference center (both in and outside session rooms). This was followed at 15 minutes by the harsher sound of a Black Grouse. The major innovation, however, occurred at 17 minutes, when a carefully-selected three minute sound clip from Sibelius' "Finlandia" blared in all five sessions simultaneously, effectively truncating overly-long presentations, questions or answers. Before the first trumpet phrase of this symphonic fanfare was done, the audience had applauded, and those moving to another room were on their feet. (Behavioral ecologists proved remarkably trainable, and readily caught on to this reliable, cost-free signal.) The three-minute 'Finlandia' clip proceeded from bustling to successively quieter passages, providing a countdown for those moving among sessions and setting an attentive mood for the start of each talk. The music not only synchronized sessions and movements, it was also used to signal the end of coffee breaks, lunch, and the mid-afternoon poster sessions. Organizers of any future meetings, for any society, should take note, and the ISBE2004 organizing committee should submit their approach for publication in "Nature"!

Veteran conference-goers expect to view posters in a hot and cramped space, usually at the end of an already-long day. We're drawn to these events as much by the availability of (sometimes free) drinks as by the science. Poster sessions at ISBE2004 broke with these traditions. Not only were posters featured during three decidedly non-beery mid-afternoon sessions, it was extraordinary that all 400+ were up during the entire meeting, and in quality

space. A thematic arrangement allowed one to cruise areas of interest, and inter-digitated poster numbering along the zigzag aisles cleverly distributed presenters and crowds throughout the entire room for all three sessions. The work of the Jyväskylä Evolutionary Ecology group, recognized as a Centre of Excellence in Finland, were featured in a special poster section also on display throughout the meeting and attended during one coffee break; locals refrained from taking spots in the main sessions. RY recalls that some of these innovations were first featured at the 1988 ISBE meeting in Vancouver, though good as that meeting was, it could not match ISBE2004's size, facilities, or organization.

The meeting's most moving moments came in ISBE President Jack Bradbury's Presidential Address, an eloquent memorial to recently-departed behavioral ecologists. Jack began with a testimonial to his father - a Disney cartoonist and animator - who died last year. Jack also spoke about Andre Brosset, Don Griffin, and of course John Maynard Smith, all of whom are remembered for important contributions to our discipline as scientists and as mentors. Walt Koenig eulogized the late Frank Pitelka in his remarks when awarding the Pitelka Award for the best paper by a recent-PhD published in the ISBE journal *Behavioral Ecology* in the past two years (see below). President Bradbury also ran an efficient lunch-time society general meeting which was without doubt the most poorly attended function of the entire program (see minutes in this newsletter, pages 6-7). Among other bits of information passed on at the meeting is that our journal, *Behavioral Ecology*, has recouped its start-up costs, continues to expand institutional subscriptions (bucking the general trend), and is now showing a profit, about \$20,000 of which will flow back to the society annually. The executive requests input from the membership on their thoughts on uses for these funds.

Social activities started off with a Saturday night Champagne and Karelian pastry reception sponsored by the City of Jyväskylä, including brief welcomes and toasts from the Rector of the University and the city's Deputy Mayor. Sunday night brought a 150 person strong visit to a working "sauna museum". In spite of the conversation alluded to in the first lines of this report, KM & AP envisioned a private spa-like setting with ample privacy and fluffy white towels and terry cloth robes. We recently learned that naked bird watching is a growing sport in Finland, but little did they know that when signing up for a traditional

Finnish sauna, they were actually signing up for naked behavioral-ecologist watching. To make the experience even more memorable, the museum required queuing and 'naked bending' through narrow entrances into each sauna, followed by 'naked ladder climbing' to get to the upper levels where they were meant to sit. With (we're sure) unintentional irony, our Finnish hosts referred to this as an ice-breaker!!! Given the above-noted age and sex ratios, it is perhaps surprising that the veteran males in our group passed on this event, which was left to the novices. (RY's game theoretic explanation is available upon request.)

Late Tuesday afternoon, participants boarded a fleet of five watercraft for a cruise through the islands of Lake Päijänne. Bouts of precipitation rotated passengers inside and onto the decks, but by the time the boats landed at a local pavilion, it had become an absolutely glorious Finnish summer evening. Several participants swam in the warm waters of the lake, and everyone waited in lengthy cues for drinks and food. Parallel to the beautiful hilltop 'Sugarshack' excursion at the Montréal meetings, and despite assurances to the meeting organizers, the pavilion staff were simply not prepared to distribute drinks and barbeque food to such a crowd at a reasonable pace. Fortunately, the perfect evening, lingering twilight, and the great company kept everyone in good humor. Finnish covers of '70s rock kept the packed dance floor hopping until the last bus took the die-hards home near midnight.

The 'Midsummer Night football tournament with bar and food', lived up to the first, if not the second and third parts of its billing. Some 900 delegates had to be served from a single beer tap, and a single (albeit reasonably large) barbeque. The food service was excruciatingly slow, but fortunately, enthusiasm for the tournament itself, occasional rain notwithstanding, carried the evening. Eight teams played through two rounds, with a dramatic shoot out between "Random Chaos" and Göteborg to determine a semifinal berth in one group. A strong Norwegian team beat Team Canada 2-0 in the final. No report of the tournament would be complete without mention of the Jyväskylä cheerleading squad (Fig. 2), including its pyramid formation topped by the diminutive (physically, anyway) Hanna Kokko.

Our next football tournament (and accompanying conference) will be held in Tours, France, July 23-29, 2006. Marc Théry presented plans for ISBE2006

with its (non-avian) preying mantis logo. ISBE meetings have generally alternated between Europe and North America, and the 2006 meeting was originally slated for Cornell, but complications with facilities necessitated the move to Tours. May we look forward to strains of *La Marseillaise* as we troop between sessions? Cornell, home of past president Steve Emlen and current President Jack Bradbury, will host the 2008 meeting. Veteran and neophyte conference-goers agree that it is a pleasure to belong to a Society whose banquet includes a minimum of speeches and awards, allowing for a maximum of drinking, eating, and conversation. The Pitelka award for the best student paper published in Behavioral Ecology in the previous two years was won by Sarah Pryke, for “Carotenoid status signaling in captive and wild red-collared widowbirds: independent effects of badge size and color”, published with Staffan Andersson, Michael J. Lawes, and Steven E. Piper. The Best Poster Awards went to runners-up Kathryn McNamara and Jörgen Sagviknon (€100 plus a year’s subscription to TREE); and to winner Lucy Gilbert (a whopping €500)! We thank a very diligent poster committee for their work on this (though some losing entrants questioned the appropriateness of the

committee’s criteria as described at the banquet: e.g. baseline points = latitude of university; 20 points for cuteness of study animal (-10 points if theory, and -5/extra leg if more than 2 legs; 30 points for cuteness of researcher (-10 if not shown on poster)).

Unfortunately, we had to leave the banquet at midnight to catch our 6:45 AM flight from Helsinki. We piled back into the Citroën, and RY drove through the lengthy dawn while DL dozed, and AP & KM reflected on the meeting:

*AP: It really was quite different than I had expected. I thought it would be mostly about attending talks, but it was more about meeting people. And from visitors to SFU, we knew more people than we expected*

*KM: Yes, and behavioral ecologists as a group are a clumsy lot, as proven by the absence of a single talk in which someone didn’t trip up or down the stairs or while entering the room, or a single meal in which no glassware was broken.*

*AP & KM (together): Most surprisingly however, we learned that John McNamara rules the dance floor. Who would have thought?*



Figure 2: Jyväskylä cheerleaders

***Dov Lank, Kim Mathot, Andrea Pomeroy, and Ron Ydenberg***  
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**BOX 1- The recent development of behavioral ecology in Finland**

We can see the effects of the academic feud at Oulu through a brief examination of behavioral ecology's development in Finland, measured as output in specialized journals (no demographic analysis included\*). Figure 3 shows the annual rate of behavioral ecology publications with authors listing Finnish affiliations, plus the national total, during three time periods: the 1976–1990 is the “Behavioral Ecology and Sociobiology” only period, the ISBE’s “Behavioral Ecology” joined the field in 1990, and we have arbitrarily broken out the past 5 years as indicating the recent state of the science. The first three “Finnish” publications in BES were by Pekka Pamilo (a population geneticist), on ant population structure, in 1979, 1981, and 1990. (Plenary speaker Lotta Sundström, in part from Pamilo’s lab, is thus a “second generation” Finnish Behavioral Ecologist). The University of Helsinki was the only institution represented until 1990, the year DL finished his field work at Oulu. By then, Erkki Pulliainen had taken a leave of absence from his professorship to pursue a career as Oulu’s Member of the Finnish Parliament, representing the Green Party. His departure allowed Markku Orell’s “tit group” to flourish. After its delayed start, Oulu continues a steady rise in publication rates, and behavioral ecologists from the University of Turku also continue to publish steadily in this field.

The first Finnish paper published in “Behavioral Ecology” was on female choice for lek size in Black Grouse, by Alatalo et al. in 1992. After his graduate student career in Sweden, Rauno returned to Finland and took a position at Jyväskylä, where the vibrant research group that superbly organized and graciously hosted this meeting has coalesced. Despite the University’s smaller size, the Jyväskylä group has managed a slightly higher rate of specialized publications in recent years than has the flagship school in Helsinki (n.s.). In recent years additional Finnish institutions have also been represented, including the University of Kuopio, the University of Lapland, Abo Akademic University, Sydvest Polytech, the Tvarminne Zoological Station, the Finnish Fish & Game Department, and the National Public Health Institute. This broadening reflects the dissemination of our field by individuals pursuing more diverse careers, as well as the field reaching into new areas, including applied fields such as conservation biology and public health. Over ninety papers published in the two journals now include Finnish affiliations. As also illustrated by ISBE2004, far from being an underground science, behavioral ecology is alive and well, and living in Finland.

\* see Kokko, H. & Sutherland, W.J. 1999. What do impact factors tell us? TREE 14:382–384.

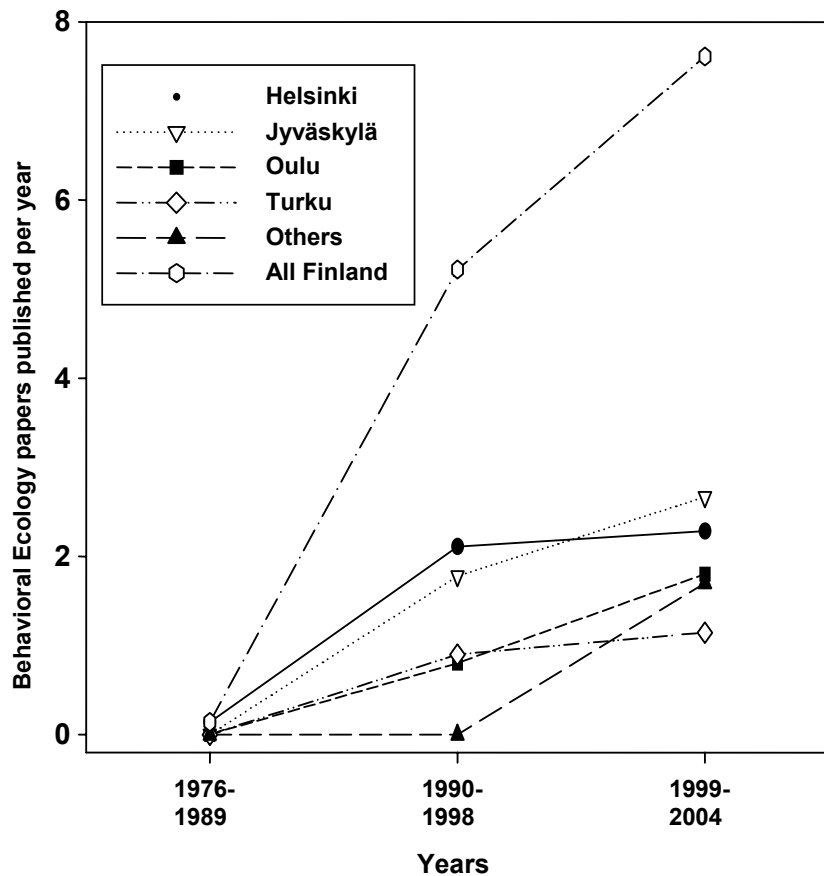


Figure 3. Publication rate of papers in “Behavioral Ecology” and “Behavioral Ecology and Sociobiology” with Finnish affiliations of authors, 1976 -- 2004. Papers with authors at more than one Finnish institution are credited once to each, but count only once in the totals.