

This journal, owned and run by academics, aims to have liberal dissemination rules and to publish as inexpensively as possible.

These aims seem to have been met. Authors retain copyright and Internet access to articles is rather open. The annual library subscription includes hard copy (about 1,000 pages) and the Internet edition. This seems excellent value, given that the publishers' journal that spawned it, *Evolutionary Ecology*, costs libraries \$777. Curiously, individual subscription costs are similar for the two unless the person's institution subscribes.

But price isn't everything. Quality is hard to assess, but authors generally submit their best research to the journal with the highest citation rating and shortest submission-to-appearance time. These two features often replace cost as determinants of journals that, from an academic's perspective, must be in the library. It is not easy to predict how the citation rating and publication times of academics' journals will compete with those of journals backed by publishing conglomerates. As a consequence, many will closely monitor the co-evolution of *Evolutionary Ecology Research* and its competitors. □

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## Pulling the wings off flies

### Animal Cognition

Chief editor Tatiana Czeschlik  
*Springer*. 4/yr. \$324, DM496

#### T. S. Collett



Although its current practitioners might demur, animal cognition has a pedigree going back to at least the nineteenth century, when George Romanes collected

interesting, though perhaps not always reliable, accounts of the intelligent behaviour of members of the animal kingdom. To give an example from Romanes' *Animal Intelligence* (Kegan Paul, 1882): "I here found a robber wasp busied in lifting from the ground a large fly ... It had scarcely raised its prey a few inches above the ground when the wind caught the wings of the dead fly and they began to act like a sail. The wasp ... was blown ... in the direction of the wind, whereupon it let itself fall to the ground ... With eager industry [it] pulled off with its teeth the fly's wings which hindered it in its object. When this was quite done it seized the fly and flew off with it untroubled on its

journey through the air." Advances in ethology, psychology and neuroscience have since put animal cognition on a more rigorous footing, and have given its practitioners a new confidence.

With clever design, it is now possible to answer questions that a few years ago it would have seemed foolhardy even to ask. For instance, do monkeys that successfully use a tool have insight into how it functions? And cognitive concepts are becoming better grounded. Neuroscientists unravelling the mechanisms underlying ever more complex cognitive processes are finding seemingly comprehensible correlations between cognitive processes and neural circuits.

The subject is certainly worth a journal of its own. A laudable feature of *Animal Cognition* is its coverage of cognitive questions across a wide range of species. This should encourage cross-fertilization of work from very different intellectual traditions.

Perhaps the major problem for this new venture is the presence of several well-established journals which already publish papers in this field. How might an editor persuade authors to switch their allegiance to a new journal? First, offer rapid, rigorous and supportive reviewing, followed by speedy publication (*Animal Cognition* seems average). Low personal and library subscriptions (not obviously a Springer policy) will also increase a journal's readership and so its attraction to authors. Other ways of raising its profile are to have guest editors organize special issues, and to give the journal a tutorial as well as an archival function by inviting topical reviews (*Animal Cognition* encourages a nice mix of reviews and theoretical and empirical studies). The impressive and diverse editorial board augurs well for a forward-looking editorial policy. □

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## Smell, taste and other hot topics

### Chemoecology

Editors-in-chief *Désiré Dalose and Jacques M. Pasteels*  
*Birkhauser*. 4/yr. \$264, SFr368  
(institutional); SFr158 (personal)

#### Tristram D. Wyatt

Frogs whose skin secretions are used to make poison arrows; chemical battles for niches on coral reefs; arms races by plants against herbivores and each other; the use of pheromones to attract mates — these are all aspects of chemical ecology, an important topic that is coming of age.

Researchers now have a much greater

understanding than in the past of the importance of chemically mediated interactions, including those of taste and smell, throughout the field of biology. This has happened in part because techniques of chemical analysis and synthesis have improved, but it is also because more biologists are now linking chemical ecology to interesting and more fundamental behavioural, ecological and evolutionary interactions.

*Chemoecology* aims to cover these interactions. It was relaunched in 1998, with new editors but an unbroken series of volume numbers. The first new volume covers a wide range of organisms, with a good balance between those of land and sea, but there is a preponderance of insects and plants (only one vertebrate paper out of 25). I imagine that this will change over future issues. The journal publishes a relatively small number of pages (200) per year, compared with about 10 times more than this published by the other main journal in the field, *Journal of Chemical Ecology*.

There is room for two journals in the field as it continues to grow. *Chemoecology* could have its greatest influence if it can increase the number of mini-reviews it carries, particularly if these integrate studies of diverse taxa, vertebrate and invertebrate and if, as the editors intend, the journal becomes a forum for current debates.

Chemically mediated systems can offer unique opportunities for researchers to investigate hot evolutionary topics, for example in sexual selection and the evolution of mate communication.

Paradoxically, as chemical ecology becomes more mainstream, the challenge for journals like *Chemoecology* is to attract authors from higher-impact evolution and ecology journals. An important factor will be the likelihood of articles being found by online electronic searches. *Chemoecology* appears in many abstracting services but is not yet in *Current Contents*, so in this area it still has some way to go. □

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## Complex issues in a specialist field

### Advances in Complex Systems

Editor-in-chief Eric Bonabeau  
*Editions Hermès*. 4/yr. Europe FF1,050, elsewhere FF1,250 (institutional); Europe FF682.50, elsewhere FF812.50 (personal)

#### H. Eugene Stanley

Another new journal? When virtually every paper is now deposited in preprint form on servers that are accessible by everyone: rich

and poor, old and young, beginning student or grand old master? Who, then, is expected to shell out for four issues a year when virtually all journals are free, or essentially free, in electronic form? Who has the optimism to believe that authors will choose to publish in a journal that may have no free electronic distribution, no listing in Science Citation Index or Web of Science, and no fewer than three months' delay between issues? In short, how can any new journal survive?

It is thus truly remarkable that the editors of *Advances in Complex Systems* have undertaken to initiate a new journal in a field in which there are already a number of journals publishing papers. This journal corrects the unfortunate situation faced in many fields that are truly multidisciplinary. Papers published by, say, a physicist in a physics journal are unlikely to be found by, say, a psychologist who normally does not scan the pages of physics journals — except by using Web of Science or other electronic media that can be searched by keyword.

The list of editorial board members, as well as the authors of the papers appearing in the first few issues, is truly outstanding, with computational scientists, biologists, physicists, chemists, an economist, a political scientist, a psychologist, a cognitive scientist and even a nuclear engineer thrown in for good measure! The journal's editor-in-chief, Eric Bonabeau, heads the Santa Fe Institute, which has made its mark on world science by creating a unique environment where scholars can meet to think and discuss in an idyllic setting, isolated both culturally and geographically from the competitive hustle of traditional science research centres that have to obtain funding for specific projects.

The bottom-line question is whether this journal is a worthwhile addition to a typical library which may be in the throes of reducing, not augmenting, its list of journal

subscriptions. The quick answer is “yes”, at least for a year, to see if there is as much interest among the library users as there is among this reviewer and his colleagues. □

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## Quick work but variable quality

### **Pattern Analysis and Applications**

Editor-in-chief S. Singh  
*Springer. 4/yr. £156 plus postage*

**Martin A. Giese**

Pattern recognition has been under investigation for more than 30 years. This interdisciplinary subject has a lot of interesting technical applications, for example in image processing, robotics and multimedia systems. A number of different journals cover pattern recognition in general and in the context of different specialized disciplines, such as computer vision, neural networks, cognitive science and machine learning.

Within this growing body of literature, the new journal *Pattern Analysis and Applications* tries to focus in particular on novel techniques and industrial applications of pattern recognition. Additionally, it wants to offer a forum for the publication of benchmark studies and comparisons of different methods. Each issue contains four to six original articles (without length constraints), one or two book reviews and a calendar of conferences and workshops on related topics. Abstracts are accessible through the Internet.

The issues so far have provided a good balance of contributions from laboratories in different nations, and between articles

about theory and about applications. A number of articles that compared and evaluated different methods seemed to me to be particularly useful. With turn-around times between four and seven months, it is definitively among the fastest-publishing journals in the field.

The quality of the contributed articles has been variable but reasonable — though it seems that many authors do not contribute their most influential work. *Pattern Analysis and Applications* will only be able to fulfil its aim to become one of the leading journals in the field if more authors are willing to provide articles of central general relevance. A subscription can be recommended, in particular for institutions that are working on applied aspects of pattern recognition. □

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## New developments in an old discipline

### **Inorganic Chemistry Communications**

Editors U. Belluco, A. S. C. Chan, D. G. Nocera  
*Elsevier Science. 12/yr. DFI 705, \$358 (institutional); DFI 212, \$107 (personal)*

**Dante Gatteschi**

Inorganic chemistry is a very old discipline. One of humanity's greatest leaps forward corresponds to the early implementation of chemical techniques for the treatment of metals and ceramics. In recent years, inorganic chemistry has renewed itself by exploring its frontiers with biology, materials science and environmental science.

Metallo-proteins and metallo-enzymes, metal ions in medicine, ceramic superconductors and organometallic precursors for semiconductors, the role of heavy metals in the environment — these are just some of the many different themes that are of interest to inorganic chemistry. At the same time the traditional areas of catalysis and reactivity have been extended, taking advantage of the most recent experimental and theoretical techniques for the investigation of molecules and their interactions. New synthetic routes for traditional compounds have been developed that are more environmentally friendly. Furthermore, the inorganic contribution to the development of supramolecular chemistry cannot be overlooked.

The monthly periodical *Inorganic Chemistry Communications*, first published in January 1998, complements journals such as *Inorganica Chimica Acta*, *Polyhedron* and *Journal of Organometallic Chemistry*. It is



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