CAREERS

FIELDWORK An ecologist's story of banking seeds and building skills **p.629**

HOW TO LEAVE ACADEMIA Six tips for gaining transferable skills **go.nature.com/24scaj**



NATUREJOBS For the latest career listings and advice www.naturejobs.com



EXTRAMURAL WORK

To serve or not to serve

When committees come knocking, scientists need to know which requests will benefit them and which will only steal their time - and how to tell the difference.

BY ROBERTA KWOK

A nastasia Ailamaki fondly remembers her first experience serving on a grant-application review committee for the US National Science Foundation (NSF). Through working with peers to evaluate and rank grant proposals asking for spectrometers and other instruments, Ailamaki, a computer scientist now at the Swiss Federal Institute of Technology in Lausanne, gained valuable insight into what makes an application clear and convincing. "I adored that experience," she says. She credits it with helping her to prepare her own successful application for an NSF early-careerdevelopment grant.

But like many researchers, Ailamaki has at times been overloaded with requests for her service. "First reaction is that I'm very flattered that I have been invited," she says. "Second is that I realize I really don't have time, by any possible measure, to be on that committee. And the third reaction is to say yes." She has served on committees of all types, including those dealing with promotions, department management, campus events and conference and workshop organization. Although many of these experiences have proved valuable, she now tries to consider requests more carefully before accepting them — weighing, for instance, whether she is uniquely qualified for the spot or whether the committee chair could easily find someone else.

Committee work is tricky for scientists to navigate. On the one hand, it can offer many benefits: opportunities to network, learn about the state of the field, get ideas to improve research and influence funding decisions or policy. On the other hand, some researchers become overburdened — they sacrifice research time to sit in meetings, they draft recommendations that go unused or they get dragged into political disputes. And institutions may lack concrete guidelines for service requirements, making it difficult for researchers to gauge whether their workload is fair.

But careful strategizing can help scientists to make the most of their service. They should gather information about committees before agreeing to join, consider the work's potential impact and proactively seek assignments that they feel passionate about. To help committees to run smoothly, members should actively aim to keep discussions on topic and treat peers respectfully. And as leaders, committee chairs should ensure that the process is efficient and professional (see 'The ruling of the chair').

Junior researchers might feel obligated to accept every committee request. At some institutions, women or researchers from >>

▶ under-represented minorities, in particular, may be recruited more often than their peers to increase diversity on a panel, and so might feel pressure to serve as a representative voice. But before deciding, scientists should consider whether the assignment is worthwhile for them personally. "You've got to get something out of it as well," says Patricia Molina, head of the physiology department at Louisiana State University Health Sciences Center New Orleans. She also chairs the National Hispanic Science Network, a virtual organization that promotes research on issues important to the Hispanic community and fosters development of Hispanic scientists.

THE POWER TO SAY NO

It can be hard to work out which invitations to turn down because service requirements are sometimes vague and guidelines vary by institution. A regional university with a limited graduate programme might expect faculty members to be heavily involved in university governance — for example, developing policies that are related to undergraduate education whereas a research-focused university might value service with national and international professional associations.

Researchers should ask their department heads, mentors or colleagues for advice on how to evaluate a request. Senior faculty members might know how much work a committee entails and the extent to which it will benefit a scientist's career. They might also warn of political landmines, such as two departments that fight constantly over the same resources. For instance, a curriculum committee could be time-consuming because of a knotty battle to change entrenched teaching methods, says Maryrose Franko, senior science programme manager at the Howard Hughes Medical Institute's Janelia Research Campus in Ashburn, Virginia.

Scientists should also investigate the potential impact of the group's work. People are often eager to serve on committees that advise federal government agencies because the invita-

tion makes them feel important, says Tom Cech, a biochemist at the University of Colorado Boulder. But he adds that they should ask the chair about the fate of their findings. In some cases, the agency is

"If we don't get involved, decisions will be made in the absence of scientific input."

committed to funding the recommendations, but in others, reports are simply circulated to political staffers with no guarantee that anyone will attempt to implement the ideas.

For some scientists, the chance to influence important issues might be worth the risk of wasting time. In 2011–13, geophysicist Steve Hickman served on a committee that advised the US Department of the Interior on improving

EASE THE PAIN The ruling of the chair

Institutions and committee chairs can take steps to make service assignments fair and painless for researchers. University departments, for instance, can be transparent about how much service work each faculty member is performing, says Joya Misra, a sociologist at the University of Massachusetts Amherst. She says that departments could e-mail researchers every year with all service assigned over the past decade. If some scientists realize that they have been doing more than their colleagues, they might feel less guilty about declining requests. At the University of Maryland in College Park, higher-education researcher KerryAnn O'Meara and her colleagues analysed annual faculty reports to calculate the average number of service activities performed by professors at a given rank and college - for example, an associate professor in the college of computer, mathematical and natural sciences - and published the data on an internal website. Faculty members use the site to compare their service workload to their peers' and decide whether to accept assignments, says O'Meara. She is willing to share templates with other universities to show them how to collect and present similar data.

If researchers bear an unusually heavy

safety of offshore development of oil and gas. Hickman, who now directs the US Geological Survey Earthquake Science Center in Menlo Park, California, did not know whether the group's advice would be followed. "It is a gamble," he says. "But if we don't get involved, decisions will be made in the absence of scientific input." Their work paid off — some of the group's recommendations, such as setting up an ocean energy-safety institute, are now in place.

Service can also pay off in networking opportunities. Members of a department seminar committee, for example, have a chance to invite speakers in their field whom they would like to meet. These visitors might give the scientist feedback on ongoing projects or write reference letters in the future. Serving with a professional association could enable graduate students and postdocs to meet potential employers, and organizing a conference will earn a researcher name recognition in the field. In 2011, when Megan Carey organized an international neuroscience symposium at her institute, she became acquainted with many of the speakers she had invited - some of whom later asked her to give talks. "It was an incredible networking opportunity for me," says Carey, a neuroscientist at the Champalimaud Centre for the Unknown in Lisbon, Portugal.

service load, institutions can compensate by reducing their teaching requirements, suggests Misra. Creating default rotations for time-intensive departmental roles can also help to distribute the work fairly between faculty members.

Committee chairs should keep the process efficient. When ecologist Jay Stachowicz chaired an educational-policy committee at the University of California, Davis, he began each meeting by noting items that seemed uncontroversial — such as eliminating a course from a major requirement because it was no longer offered — and asking whether anyone opposed passing them. If not, he moved on.

The chair should also ensure that members treat each other respectfully. Senior faculty members who try to bulldoze junior researchers may need a private reminder that each person's opinion counts equally, regardless of his or her rank. "I want everybody to agree that they're going to park their titles at the door," says John Murry Jr, coordinator of the higher-education programme at the University of Arkansas in Fayetteville. If some people are dominating the discussion, the chair can intervene or pull quieter members aside during a break to encourage participation. **R.K**.

And some committee members forge personal, not just professional, connections. When Hickman chaired a science-advisory group for the International Continental Scientific Drilling Program, the team took trips to drilling sites around the world together, which helped to build camaraderie. "Some of my best friends I've made in my field have been on committees like this," he says.

COMMITTEE PHOBIA

For scientists who loathe committees and simply want to do their research, service assignments that benefit their immediate working environment may be the most palatable. By participating in faculty searches, for instance, researchers can select colleagues who could positively influence their work. "Being able to shape your environment is something that's important for all, even for the person who says, 'I just want to get my science done,''' says Jeremy Boss, an immunologist at the Emory University School of Medicine in Atlanta, Georgia. A new colleague could suggest ideas to improve research, such as studies to read or experimental techniques to try.

Researchers may also volunteer for committees that appeal to them, instead of waiting for requests. "The worst thing is to get assigned to some random committee that you have no passion for," says Cech. Once they have chosen committees for themselves, scientists can use those service obligations as reasons to decline less-desirable assignments.

After committing to a group, scientists should execute their duties diligently — it is always possible that the committee chair will evaluate them for a promotion later.

If the committee's goal is vague or discussions are unfocused, researchers can ask the chair to clarify the mission with administrators or to provide agendas in advance. During meetings, members should avoid making comments that do not directly serve the committee's purpose. For instance, when developing policy, people often tell anecdotes to show why the regulation is necessary, says Boss. "All it does is waste time," he says. Instead, the team should concentrate on the wording of the policy and ensure that it covers the necessary scenarios.

Researchers outside traditional universities may encounter a wide variety of expectations and styles. Scientists at the Janelia Research Campus have minimal service obligations so that they can focus on research, whereas those at the Wilderness Society, a conservation organization in Washington DC, are encouraged to serve on committees that influence policy and management decisions. At the Champalimaud Centre, a small group of neuroscientists has been shaping the direction of the budding programme. Faculty members are involved in more types of service than are those in academia, and their meetings can be more intense and efficient. For example, they all participate in hiring decisions, but rather than interviewing candidates over several months, they gather for a one- or two-day symposium to see applicants give talks.

Scientists should discuss committeeservice expectations during their job-offer negotiations. A supervisor might even be able to provide precise requirements. Molina expects junior researchers in her department to spend no more than 5% of their time on committee work; mid-level researchers are expected to spend 10–15%.

Ultimately, science cannot run without service. Researchers need to review each other's proposals, contribute to professional organizations and help universities to foster strong research and student development. Faculty members who avoid all committees risk isolating themselves from the community or being perceived as slackers. "In science, people are expected to be givers and sharers," says Molina. Still, that is no reason to feel guilty for setting boundaries. "I believe in participating and volunteering," she says, "but there's a limit."

Roberta Kwok *is a freelance writer in Seattle, Washington.*

TURNING POINT Heather Schneider

For her postdoc, ecologist Heather Schneider joined Project Baseline, a nationwide US initiative that is developing a seed bank for future scientists to study how plants are evolving in response to climate change. The project has left her little time for her own research at the University of California, Santa Barbara, but the skills she has gained have broadened her career avenues.

What is a field season like?

It's really daunting. Project Baseline's goal is to collect seeds from 43 species - at 10 sites for each one. The project so far has collected 3 million seeds from species both native and introduced. My adviser, Susan Mazer, and I oversee collection in the western region — 237 distinct plant populations of 20 species — and this is the final of 3 field seasons. I spend January to March getting field permits to collect specimens in national and state parks, nature preserves and the University of California reserves. Then I use herbarium records to find historical populations. I try to visit each of our sites twice a season - once while plants are in bloom, to find populations more easily and to collect environmental data, and again to gather seeds. Last year, our field season ended in mid-October.

What about this project lured you away from a pure research focus?

Few things are as important as understanding how ecosystems will respond to climate change. I was interested in helping to create a resource that would be useful for both basic and applied science for the next 50 years. To me, that would have a big impact on ecology and evolutionary biology — much bigger than any single paper I would ever write. I also felt that I have the set of skills — field botany, plant identification and collection of herbarium specimens — necessary for the job.

Did it feel risky to move away from conventional research?

A little. Although my career trajectory has zigzagged, there has been one underlying theme — assessing the impact of human-made threats to ecosystems. I have focused on invasive species, air pollution and habitat degradation. I joke that when you work on short-term grants, you end up with a long tail of 'publications in progress' that follow you from job to job. I'm still working on papers from one to two jobs ago. So it was appealing that there would be less pressure to publish in this position, which could give me a chance to catch up on papers I'm still working on.



Does publishing less concern you?

The principal investigators on the project made sure that our efforts benefited my and the other postdocs' careers. Susan and I work on a greenhouse experiment in the off-season, when we're not in the field for Project Baseline. We have one paper in revision and one in review, so I still am getting papers out.

What are your hopes for future use of this resource?

The research possibilities are huge. Given my own interests, I hope that people will use it to look at ecological interactions. For example, as pollinator communities change, how will that affect wild-plant reproduction? I'm also interested in what the weedy species will do — will the geographical areas where they are found shrink or expand?

What are your job prospects?

I would be interested in a teaching job at a smaller university. I am OK not ending up at a top-tier research university because funding rates are not that encouraging. And the skills I have gained on Project Baseline — project management, budgets, organization, troubleshooting — are applicable to all kinds of other jobs.

Do you plan to promote use of Project Baseline data in future?

Yes. The postdocs on the project want to feel that this resource will be well cared for. I know there are plans to advertise it widely. The principal investigators invited all the postdocs to be on the advisory board, and it is nice to know that we will have a part in evaluating the proposals for its use in the future.

INTERVIEW BY VIRGINIA GEWIN

This interview has been edited for length and clarity.