



Crew members have to cooperate to overcome difficulties on long voyages.

the conditions because they are trying to achieve something important to them, such as being the first people to ski to the North Pole. Similarly, scientists should keep in mind the scientific problems they will be able to solve, or the papers they will publish, when they're staying up all night to monitor instruments or bathing from a bucket in the desert.

Shrugging off the frustration is easier for old hands than for expedition novices such as Patricia Puerta, a marine-biology graduate student at the CSIC's Mediterranean Institute for Advanced Studies in Majorca, Spain, who is staking her PhD on plankton data collected on the *Hespérides*. On Puerta's first cruise, loose equipment on deck broke her incubation tanks during storms. "My stuff was cannon fodder," she recalls, and she worried that she wasn't making enough progress on her PhD. By the second leg, Puerta had found better ways of rigging her incubation tanks to save them from damage. She also learned the value of patience, she says. "Delays still bother me, but now I'm more accepting." Puerta realized that not every sample was crucial.

Part of becoming an accomplished field-worker is learning to delegate responsibilities such as planning the logistics of an expedition, and to rely on experts to handle things that the researchers can't do as effectively themselves, says Wright. In the Afar, that has meant trusting local scientists or technical staff to help install instruments, negotiate maintenance with Afaris and rent camels for transport. "We couldn't do any of this without our local colleagues," says Wright. "You can't have your eye on all of the balls that are in the air." For Puerta, that meant accepting practical assistance: when her fraction collector broke, preventing her from taking automatic water samples overnight, she didn't, in this instance, have the technical skills to fix it, and had to trust that someone else on board did. "It can make people feel helpless," says Escribano, who, it turned out, travels with

a silver briefcase of electronics equipment and was able to diagnose and repair Puerta's instrument.

Seasoned field scientists must also learn to deal with extended stretches of discomfort and boredom. Breaking the routine on the ship can help to distract people from the discomforts, says Escribano. He has used costume contests and card games to entertain the research team. Others have different ways of dealing with the relentless presence of others, says Leon; she recalls a polar explorer who would "dig real deep in her sleeping bag at night to cover her head" to secure some respite from her companions.

Technology can also mitigate the monotony of fieldwork. Satellites allow team members to ease homesickness by contacting family and friends by phone and through e-mail and social-networking sites, even if only for limited amounts of time. Communications technology can also facilitate scientific decision-making, says Dachs. "On a cruise, you have to react fast, and we use e-mail to consult colleagues on land when we have a problem or a question," he says. From the Indian Ocean, he was able to talk to the other senior expedition planners at research institutes throughout Spain and work out which observations to trim. Not everybody was happy, but everybody was in the loop, and in the end they didn't have to cut quite as many observations as Dachs had feared.

Dachs has one more trick up his sleeve to boost morale: creative time-keeping. The day before arriving in Perth, Australia, for a short break in the cruise, the *Hespérides* approached its offshore meeting point — where a local harbour pilot helps guide the ship into port — earlier than announced. "When you make the cruise schedule," says Dachs, "you always underestimate the ship's speed." ■

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## UNITED KINGDOM

### Postdocs with promise

The University of Birmingham, UK, has launched a global search for 50 postdocs, mainly in science, engineering and maths. The university is offering five-year fellowships leading to permanent academic posts, providing the stability sought by many young researchers. It is initially investing between £3.5 million (US\$5.7 million) and £5 million in the scheme. Applicants must have achieved a PhD in the past seven years; postdocs will earn about £37,000 annually. "Our vision is to reinvigorate research while creating a cohort of outstanding people that identify with this university," says Adam Tickell, pro-vice-chancellor for research. Tickell adds that if the programme receives many qualified applicants, funding will be available to hire more than the initial 50. The first round of applications closes on 1 September.

## GERMANY

### Research centres open

Twenty-one collaborative research centres in Germany will create up to 630 jobs for postdocs and PhD candidates. The German Research Foundation (DFG), the country's main granting agency, is spending €197 million (US\$289 million) on the centres, which will focus mainly on biological and physical sciences. Research programmes will range from sensory processing to star formation. Opening on 1 July at various host universities, the institutions bring the total number of DFG-funded research centres to 250. The agency will fund the centres for up to 12 years, with about 25 contract scientists each, mostly PhD candidates and the rest postdocs. There are no restrictions on the nationalities of applicants.

## US POSTDOCS

### Women feel isolated

Focus groups convened by the US National Postdoctoral Association (NPA) in Washington DC say that women's academic careers in the United States are hindered by factors including isolation, lack of confidence, perceived lack of status and unfriendly family policies. The groups are part of a National Science Foundation-funded project to identify best practices for advancing female postdocs' careers. Cathie Johnson Phillips, NPA executive director, says that many women in all disciplines reported inequality and isolation. The NPA will publish its findings in 2012.