

Northern birds laying eggs earlier

In April, researchers reported that a warmer northern climate appears to have nudged up the arrival of spring (SN: 5/10/97, p. 290). Ornithologists in the United Kingdom have now found that many birds are laying their eggs earlier—an average of 9 days sooner than in 1971.

Humphrey Q.P. Crick and his colleagues at the British Trust for Ornithology in Thetford analyzed 74,258 records of the trust's breeding data obtained from 65 bird species over 25 years. The researchers found that 20 of the species—including wrens, waders, and magpies—were laying their first eggs significantly earlier. Only one species, the stock dove, had shifted to laying eggs later.

Given the evidence of warming, "trends toward earlier laying times are expected," the researchers write in the Aug. 7 NATURE. They add that the tendency might be beneficial if it gives young birds more time before winter hits, but there would be a downside if it throws off the availability of the birds' usual sources of food. —C.M.

Whiff of grass helps kill bugs fast

Planting mixtures of plants instead of monocultures is one way to foil crop pests. Such interplanting not only makes it harder for the pest to get at the crop, it can take advantage of insect-detering chemicals produced by other plants.

One such scheme may be useful for growing maize and sorghum in Africa, researchers from Kenya and the United Kingdom report in the Aug. 14 NATURE. John A. Pickett and his colleagues at the Institute of Arable Crops Research in Rothamsted and at the International Centre of Insect Physiology and Ecology in Nairobi tested a variety of wild grasses in the field and found that molasses grass (*Melinis minutiflora*) both repels stem-borer pests and attracts certain wasps. The wasps reduce the pest population by laying their eggs inside the stem borers.

When planted with maize in alternating rows, the molasses grass reduced crop damage significantly. About 5 percent of the intercropped maize plants were damaged, compared to 39 percent in a maize monoculture.

The researchers identified a family of volatile aromatic compounds in the molasses grass that attracts the wasps. The lure seems to be not the smell of molasses but a piney scent.—C.M.

Where birds reign, ants rain

Ants that haul themselves up tree trunks in search of insects and other food sometimes take the easy way down: They jump. What's more, like any cliff-hanging action figure, they'll jump to get away from the bad guy—or bird.

In the pine forests of northern Sweden, ecologist Paul D. Haemig of Umeå University set out to see just what effect a bird in a tree has on the northern wood ant (*Formica aquilonia*). He measured ant traffic moving up and down trees outfitted with liquid-filled traps to catch any falling "ant rain." Half of the trees were baited with suet to attract birds.

Without any birds around, 0 to 12 percent of the ant traffic took the jump, Haemig reports in the July ANIMAL BEHAVIOUR. When a woodpecker or other bird appeared, 3 to 28 percent of the traffic came down as rain. The longer the birds hung around, the heavier the ant rain became.

Some of the raining ants may simply have been blown or jostled off the tree by the foraging bird, Haemig offers, but he and other researchers have observed ants "deliberately" leaping off trees or laboratory tables. The ants may be acting like aquatic insects that launch themselves into the current of a stream as a means of escape, he says. Still, some ants would rather fight than flee. In earlier work, Haemig found that worker ants can attack foraging birds. —C.M.

Revising the risk of prostate surgery

Prostate patients take heed: A much-ballyhooed surgery for prostate cancer may not work as well as previously believed.

Nerve-sparing surgery, pioneered by surgeon Patrick C. Walsh of the Johns Hopkins Medical Institutions in Baltimore, had been thought to preserve sexual function in most men treated for cancer of the prostate, the gland that produces some of the fluid in semen.

Now, a report in the Aug. 6 JOURNAL OF THE NATIONAL CANCER INSTITUTE tempers the surgery's promise.

In a study of men undergoing surgery for prostate cancer, James A. Talcott of Harvard Medical School in Boston and his colleagues surveyed 37 men who had had nerve-sparing surgery and 12 who had had a more traditional operation. As expected, all 12 of the latter were impotent a year after surgery. Surprisingly, so were 33 of the men who had undergone the newer procedure.

These results have yet to be confirmed, Talcott cautions. Meanwhile, men should be aware that the nerve-sparing surgery is no guarantee of sexual function. "That's not to say that [men] should turn away from the procedure," Talcott says. He advises men with prostate cancer to have a "frank discussion with their surgeon." —K.F.

Smokers' hearts don't pick up pace

For some people, the combination of vigorous activity and cigarette smoking can prove deadly. A new study shows that smokers whose hearts fail to rev up in response to exercise run a five times greater risk of heart attack or death than nonsmokers do.

That increased risk isn't simply a reflection of poor physical condition, says Michael S. Lauer of the Cleveland Clinic Foundation. Lauer and his team ruled out the effects of physical fitness in the new study, which appears in the Aug. 5 CIRCULATION.

The nicotine in tobacco mimics the action of a hormone called epinephrine, which boosts heart rate during physical activity. Thus, a smoker's heart is constantly bombarded with messages to pick up the pace. After a while, the heart may become immune to these signals and fail to speed up, even when the body requires lots of oxygenated blood, as during exercise, Lauer says.

The team studied more than 3,000 men and women who participated in the Framingham Heart Study. About one-third of the smokers in the study showed a dulled heart response during an exercise test. Heavy smokers' hearts failed to speed up most often, Lauer notes.

The death rate during the 8-year study was 2 percent for male nonsmokers and 4 percent for male smokers whose hearts responded normally during an exercise test.

Fully 10 percent of male smokers with an abnormal heart test died over the course of the study.

Three percent of male nonsmokers developed heart disease or had a heart attack during the study period. That risk soared to 21 percent for male smokers with an impaired heart rate during the exercise challenge, the team noted.

Women, who tend to develop heart disease later than men, were not included in the death rate or heart disease analysis because too few of them had died or suffered a heart attack during the study. Lauer believes that the dangers of a heart that fails to speed up will apply to female as well as male smokers.

For people who smoke, the study is yet another reason to kick the nicotine habit.

"If smokers quit, their heart rate responses will probably revert to normal," Lauer says. That should lower their risk of death and heart disease, he adds. —K.F.