A cleaning session.

ECOLOGY

Feasting on Fish

Like drivers at a carwash, coral reef fish queue at cleaning stations to have parasites, slime, and broken scales nibbled away by smaller fish and by shrimps. These species interactions are interesting for their tropical ubiquity and the diversity of species that can be found as clients and cleaners. Although some cleaners are obligate professionals, others are dilettantes and adopt this life-style intermittently.

Floeter *et al.* have compiled data from around the tropics to tease out the selection pressures acting on these interactions. The basic emerging relationship is that, owing to abundance, the more common, planktivorous, and gregarious species take up most of the cleaner's time. Client size doesn't seem to be very important, nor does professionalism, when it comes to dealing with carnivores that might eat the fish or shrimp that is cleaning them. Hence, this study adds to a growing body of evidence suggesting a central role for abundance in structuring species interactions. Guimarães *et al.* have also looked at cleaning mutualisms. They document a pattern of nestedness, dominated by a core of a few, very busy cleaner species that service a wide variety of clients, with less popular cleaners and clients, both of which interact with core species but not each other, lounging on the periphery. — CA

J. Anim. Ecol. 10.1111/j.1365-2656.2006.01178x (2006); *Biol. Lett.* 10.1098/rsbl.2006.0562 (2006).

CHEMISTRY

Treacherous Tetrahedron

The relative strength of the triple bond in N_2 renders compounds with three or more catenated nitrogen atoms unstable, often explosively so. Banert *et al.* have succeeded in the careful preparation and isolation of the nitrogen-rich, dangerously explosive tetraazidomethane, $C(N_3)_4$, as a colorless liquid at room temperature. The stable, readily available trichloroacetonitrile molecule proved the most convenient precursor, affording the product after an 18-hour reaction with sodium azide in acetonitrile solvent. Cycloadducts with three and four equivalents of cyclooctyne could be isolated in ~5% yield and were characterized crystallographically. Reaction with norbornene, however, yielded unusual tetrazole derivatives in place of expected 1,3-dipolar cycloaddition adducts. Despite the compound's instability, the authors acquired clean ^{13}C and ^{15}N nuclear magnetic resonance spectra, as well as vibrational and mass spectral data, and an estimated boiling point of 165°C. Both Brønsted and Lewis acids accelerated exchange with free azide. — JSY

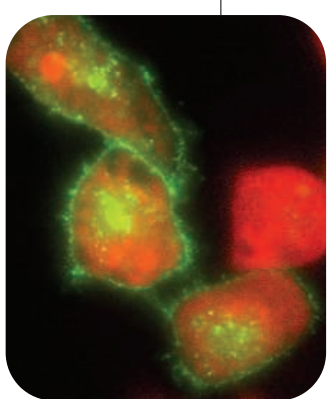
Angew. Chem. Int. Ed. **45**, 10.1002/anie.200603960 (2006).

BIOMEDICINE

An Absorbing Tale

Folate is a water-soluble vitamin that plays a critical role in metabolism. Because humans cannot synthesize it biochemically, they must obtain it by ingestion from folate-rich dietary sources. Maternal folate deficiency has been associated with an elevated risk of neural tube defects in the developing embryo, which can lead to malformations of the spine (such as spina bifida), skull, and brain. Because of these public health issues, there is considerable interest in understanding the specific molecular mechanisms that the body uses to absorb folate from food.

Through a combination of database mining, cell biology, and human genetic analysis, Qiu *et al*. have identified a transporter protein that appears to be responsible for the intestinal absorption of folate. Previously isolated as heme carrier protein HCP1, the proton-coupled folate transporter (PCFT) was expressed in the small intestine, bound folate with high affinity, and transported folate efficiently into cultured cells at the low pH that characterizes the intestinal milieu. An inactivating mutation in the corresponding gene was identified as the molecular culprit in a family with hereditary folate malabsorption. — PAK



PCFT (green) localizes to the plasma membrane.

Cell **127**, 917 (2006).

PSYCHOLOGY

Me *et al.*

An established and unsurprising characteristic of people working within teams is that each individual believes that he or she makes a disproportionately large contribution to the group output, so that the summed estimates are greater than the whole. These self-appraisals can be tempered if individuals are encouraged to regard what other team members do, and this shift in perceptions is thought to be conducive to group harmony and satisfaction.

Caruso *et al.* have looked more closely at whether structural heterogeneity within teams might influence perceptions and feelings in other-regarding situations. In studies gauging the self-contribution estimates of coauthors of 150 published papers (and their enjoyment of those collaborations) and experimentally manipulating the perceived and objective contributions to group projects, they found that workers who believed that they had done more (and those who actually had done more) were less satisfied, relative to those who had done less, when asked to consider the contributions of their teammates, in part because they became more aware of inequalities when taking a broader perspective. An additional

Continued on page 1661