

## Notions abordées : « L'idée de progrès »

Malcolm Burrows, UK, Scientist

# See How They Hop!

**Malcolm Burrows:** So the real problem for these planthoppers is...is when they have both hind legs, to make sure that they move exactly at the same time as each other, because if they don't, then there will be some twist imposed on the jumping movement, which will spin the body round, and so a lot of energy of a jump will be lost in just making the body spin around, instead of propelling it forward, away from something that might be trying to eat it, or grab hold of it or whatever. So this.. this is where the discovery of gears comes in, to...so to ensure that both legs move at precisely the same time, what this animal has got, is, on its hips near the...near where they insert on the body, the...the hips are curved, and on that curved inner surface of those hips are a series of gear-like teeth, about a row of about ten or twelve of them, the same number on each side, and the legs...the gear on the left hind leg inter-digitates, meshes with, the gear on the right hind leg, so this means that when the right leg starts to move, the gears will be engaged with those on the left leg, and that will mean that the left leg will also move at the same time.