

জনি ০৪ JUN ১৯৮৮ ...
বৃষ্টি ... ৬ ...



Rap songs from the deep

Geoffrey Cowley

02 JUN 1988

When scientists talk about whales singing songs, they're not talking about mere noise. They're talking about intricate, stylized compositions—some longer than symphonic movements—performed in medleys that can last up to 22 hours. The songs of humpback whales

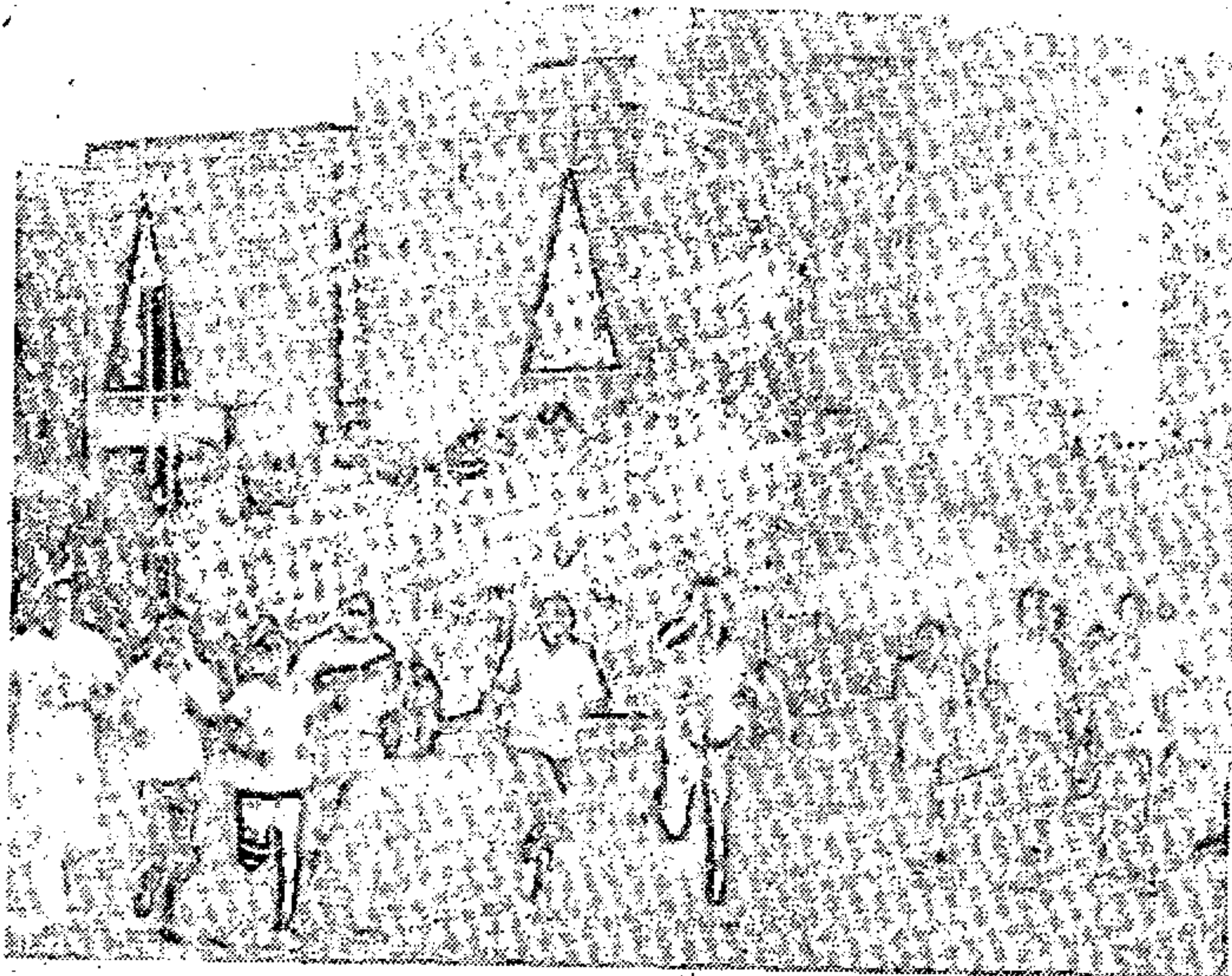
Mass., and Payne, of Cornell University's Laboratory of Ornithology, used a spectrograph to create linear pictures of hundreds of humpback songs. Once on paper, the songs were easily divided into "themes" made up of "phrases" and "subphrases". In analyzing

repeat the sound? Do they use rhyme to prime their memories, as human beings do? To find out, Guinee and Payne analyzed 548 humpback songs in terms of two variables: number of themes and prevalence of rhyme. If rhyme does serve as an aid to memory, they figured,

mainly by males and mainly during the breeding season, is that they serve as mating and dominance displays. In some songbird species, females mate only with males who know the local tune, and they favour the males with the largest repertoires. Payne speculates that humpback songs (which are indistinguishable from bird songs when played at high speed) may work on a similar principle: for a male, knowing the song may be a precondition to sex—and adding a few flourishes may be an outright inducement. If the males are indeed competing to impress the females, the constant changes in the shared song may reflect everyone's eagerness to keep up with the trend setters.

Aquaculture :

Scientists have yet to catch a humpback innovating, or copulating, so the link between the two is still tenuous. But certain males are known to spend more time than others "escorting" females. Guinee hopes that by analyzing these Casanovas' voices on a computer, and comparing them with the voices of less popular males, she'll find subtle differences in their singing styles. Whatever purpose the humpbacks' rhymed songs turn out to serve, one thing is clear: they're cultural inventions, not automatic responses. They change like hemlines, says Payne, and provide "one of the nicest examples of cultural evolution that has been gathered from any species in the animal kingdom, including man."



Jogging has become a favourite sport of students.

can change dramatically from year to year, yet each whale in an oceanwide population always sings the same song as the others. How, with the form changing so fast, does everyone keep the verses straight? Biologists Linda Guinee and Katharine Payne have been looking into the matter, and they've come up with an intriguing possibility. It seems that humpbacks, like humans, use rhyme.

In a newly published study, Guinee, of the Long Term Research Institute in Lincoln,

these components, Guinee and Payne detected an interesting pattern: they found that a particular subphrase will often turn up in the same position in adjacent themes. For example, a theme consisting of several repetitions of a phrase that looks like "Chika Chika Boom Boom" might follow a theme based on the phrase Weeee "Boom Boom". The subphrase "Boom Boom" provides the same sort of continuity as the "ock" sound in "Hickory dickory..."

But is that why the whales

it should become more prevalent in the more complicated songs. As it turns out, that's exactly what happens. The rhymelike structures are most likely to occur, they report in the current issue of the journal Ethology, "in songs containing the most material to be remembered"—the ones with the most themes.

The larger mystery is why the humpback bother to memorize these elaborate compositions at all. The best guess, given that the songs are sung