

SCIENCE'S COMPASS

body) revealed a seroprevalence of 10 to 20% (i.e., 10 to 20% of chicks had high titers of antibody) for *S. gallinarum* at the beginning of the 20th century [see references in (1)]. The finding that oral immunization of chickens with a *S. gallinarum* vaccine results in 60% protection but only 10% of birds react positive in the tube agglutination test can be used to calculate the fraction of immune animals from seroprevalence data (8). With this approach, it can be estimated that, at the beginning of the 20th century, 90% of birds survived an encounter with *S. gallinarum* and 60% of the surviving population had immunity (thus, an estimated 64% were removed from the susceptible population). Importantly, birds with immunity to *S. gallinarum* have been shown to be equally protected against colonization with *S. enteritidis* because both serotypes share the immunodominant O9 antigen (9). By using the above value of 0.64 for γ to calculate R_0 , it can be estimated that, given a basic case reproductive number for *S. enteritidis* of less than 2.8, population immunity to the O9 antigen elicited by *S. gallinarum* was sufficient to exclude *S. enteritidis* from circulation in poultry. It is likely that R_0 for *S. enteritidis* is considerably below

2.8, because even at the peak of the epidemic in 1993, this pathogen was isolated from only 7.6% of laying hens at slaughter (10). These theoretical considerations do not prove that eradication of *S. gallinarum* triggered the invasion of *S. enteritidis* into poultry flocks. However, our analysis suggests that *S. gallinarum* was able to competitively exclude *S. enteritidis* from circulation in poultry flocks at the beginning of the 20th century.

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CORRECTIONS AND CLARIFICATIONS

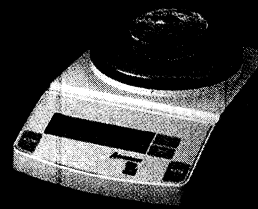
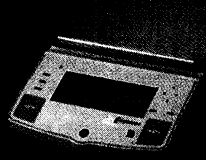
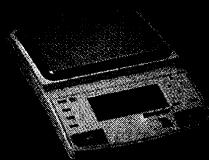
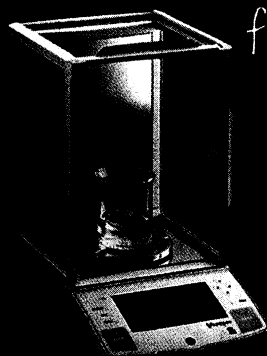
News of the Week: "Start-up claims piece of Iceland's gene pie" (11 Feb., p. 951). Snorri Thorgeirsson's association with the company UVS is in a personal capacity. It should have been stated that his views expressed in the article do not necessarily represent the views of the National Cancer Institute.

Report: "Honeybee navigation: Nature and calibration of the 'odometer'" (4 Feb., p. 851). Mandyam B. Srinivasan's first name was misspelled.

Review: "Emerging infectious diseases of wildlife—Threats to biodiversity and human health" by P. Daszak *et al.* (*Science's Compass*, 21 Jan., p. 443). The definition of BSE should have read "bovine spongiform encephalopathy," not "bovine spongiform encephalitis."

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