Mad Honey
To the Editor.—Rhododendron ponticum, a member of the botanical family Ericaceae, grows extensively on the mountains of the eastern Black Sea area of Turkey.1,2 Its flowers are pink or vio-
let. All parts of this particular species, including the nectar, contain toxic diterpenes known as graganotoxins (formerly, andromedotoxins). Ingestion of honey derived from this plant may cause profound hypotension and bradycardia.3 It is known locally as "mad honey.”
From 1984 to 1986, sixteen patients with honey intoxication were seen at the Hospital of Karadeniz University in Trabzon, Turkey. Their mean age was 41 years (range, 30 to 48 years). Fourteen were men and two were women. Samples of honey that the patients had eaten were analyzed in the chemical analysis department of Ankara (Turkey) Health Institute. In each specimen, pollens belonging to Rhododendron species were found.
The complaints in all patients started approximately one hour after eating about 50 g of honey. Common complaints were dizziness, weakness, excessive perspiration, nausea, and vomiting. Four had syncope. In each patient, hypotension or shock and bradycardia were exhibited. Eleven had sinus bradycardia, three had nodal rhythm, one had the Wolff-Parkinson-White syndrome, and one had complete atrioventricular block. Intravenous saline and 0.5 mg of atropine were administered to 14 patients who had sinus bradycardia or nodal rhythm. The patient with Wolff-Parkinson-White syndrome and the patient with third-degree atrioventricular block were injected with 0.1 mg of isoproterenol every two to six hours. In an average of 24 hours, all the patients recovered and their clinical findings, blood pressures, and electrocardiograms returned to normal.

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See also p 2009.

The Bitter Herbs of Seder:
More on Horseradish Horrors
To the Editor.—In a recent letter, Dr Spitzer1 described syncope after the ingestion of a large amount of wasabe (a Japanese horseradish preparation commonly served with sushi). We report a similar episode at a Jewish Passover Seder. The Seder is a traditional Passover meal involving a series of ceremonial rituals, among them eating “bitter herbs” to commemorate the bitterness of Jewish slavery in ancient Egypt. Raw horseradish is commonly used for this purpose.

Report of a Case.—A 55-year-old hypertensive man, who was being treated with a thiazide diuretic, conducted his family’s Passover Seder. One of the bitter herbs was ground horseradish that had been prepared in an electric food processor earlier in the day and placed in an airtight container. The family had neglected to follow its custom of uncovering the horseradish before the Seder. In the usual Orthodox fashion, the man consumed the bitter herb after a cup of red wine, before the main meal. Other members of the family had chosen to eat romaine lettuce, an alternative “bitter herb.” The man commented that the horseradish was unusually potent; he nevertheless ate the entire portion, which was the size of a large olive, as (religiously) prescribed. On completing it, he became pale and diaphoretic, complained of abdominal discomfort, rose from the table, and collapsed. Brief clonic movement of his right hand was observed before he regained consciousness a few seconds later. His daughter, then a medical student, contacted his physician but by the time the call was returned, the man had recovered enough to refuse further medical evaluation that evening. He completed the ceremonial observance and meal in an abbreviated manner. Subsequent evaluation included an electrocardiogram, an electroencephalogram, and a computed tomographic scan of the head; all were normal.

Comment.—The abdominal discomfort and convulsive syncope observed in this patient are consistent with a vasodepressor mechanism for horseradish-induced syncope, as Dr Spitzer suggested, perhaps initiated by direct irritation of the gastric or upper respiratory tract by horseradish vapors. Diuretic therapy and preceding alcohol ingestion may have further decreased right-sided heart filling and cardiac output in the presence of vagal stimulation.

Exposing freshly grated or rehydrated horseradish to air for half an hour or more before ingestion significantly reduces its irritant effect. Passover Seder participants and others who use this condiment should follow similar procedure. Devout diners with a history of cardiovascular disease might be encouraged to substitute a milder “herb” to avoid unduly “bitter” effects.

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Tobacco and Cancer of the Tongue in Young Adults
To the Editor.—Reports have appeared in the literature regarding the increased mortality from tongue cancer

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