nal Juan de Lugo, and its powdered form (*Pulvis Jesuiticum*) was sold there for its weight in gold.

According to Markham (*4*), Linnaeus named the genus which yields the febrifugic bark *Cinchona* (1742 edition) and *Cinhona* (1767 edition) in honor of the Condesa, whom he had only heard about and whose name he misspelled. Another version says that Linnaeus read about the Condesa in Bado's work. Bado's chief informant regarding the "quina" bark was an Italian merchant living in Peru, Antonio Bollus. Apparently, Bollus, in his correspondence with Bado, spelled the family name of the viceroy "Cinchón" so as to ensure its correct pronunciation in the Italian language (*5*). In any case, Linnaeus died before the incorrect spelling could be pointed out to him.

The legend of the Condesa was accepted as fact as recently as 1930 (*6*). However, the detailed diary of the Conde de Chinchón IV, kept by his secretary Juan Antonio Suardo, was published in 1936 and cast doubt on the accuracy of the Condesa's purported role. Historian Paz Soldan (*7*), on reviewing the *Diario*, expressed his belief that the true story was told by Suardo. The *Diario* tells that the Conde, rather than the Condesa, had malaria in 1638. The Condesa nursed the Conde back to good health using the "quina" or "precious unknown substance" that she obtained from Juan de Vega. The Conde recovered in 1640 and, in gratitude, built a temple to the Lady of Prado, to whom the Condesa had been directing her prayers. On their way back to Spain in 1641, the Condesa died in Cartagena (Colombia), and the Conde returned to Spain alone. Paz Soldan believes that it was not the Conde, but the Jesuit missionaries, who brought the bark to Europe. They were anxious to inform the public of its therapeutic properties, but encountered opposition to its acceptance. The Countess' Powder story was then concocted to romanticize its history and break down resistance to the new remedy.

Finally, another variant of the story (*8*) has the Conde suffering and recovering from malaria without ever being given the Peruvian bark. The Condesa then dies from an epidemic raging in Panama while she and the Conde await passage home. The Conde continues the journey home and apparently brings large quantities of the bark back to Spain, where it is then distributed by him and the Jesuits. How the Conde learned about the therapeutic powers of the bark remains unclear.

Recent evidence, therefore, makes it appear unlikely that the Condesa de Chinchón ever had malaria, ever partook of cinchona bark, or ever brought it back to Spain.

Herzenberg's second point, happily, is less controversial. Artemisia, the Turkish woman botanist, seems indeed to have been the inspiration for the genus bearing her name and is said to have "adopted" the herb mugwort (*Artemisia vulgaris*) as her own (*9*). She was probably named after Artemis, the complex feminist Greek goddess. Incidentally, Artemisia, in her guise as Queen of Caria, is also known for having built a large tomb, the Mausoleum, for her deceased husband, King Mausolus, in the city of Halicarnassus.

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Photoreceptor Alignment

Mechanisms that could potentially underlie the precise alignment of cone photoreceptors with the center of the pupil have been proposed and evaluated since the directional sensitivity of the retina was first described (*1*). On the basis of a series of psychophysical studies, we proposed a positive phototropic mechanism for this phenomenon whereby photoreceptors are actively positioned toward the center of the light distribution in the pupil. Moving the light distribution (with a decentered aperture contact lens) led to a corresponding movement in the peak of the Stiles-Crawford function (*2*). As we reported, removing all light (with long-term monocular patching) led to a decrease in the peakedness of the function, that is, pronounced flattening (*3*). It now appears that our interpretation of the latter finding was in error. Recent measurements after monocular occlusion have failed to reproduce the flattening in the Stiles-Crawford function (*4*). It appears that the patching regime in the original studies was extreme and led to corneal edema, which itself can have a profound effect on the shape of the measured Stiles-Crawford function. Thus we wish to retract our original interpretation of the patching experiments. While an active light-driven alignment mechanism clearly plays a key role under normal lighting conditions, we have yet to identify mechanisms responsible for maintaining alignment in total darkness.

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Neogene Congo Basin Rain Forest

From reactions I have received concerning the article by Roger Lewin about the Bophuthatswana workshop on paleoclimates (Research News, 15 Mar., p. 1325), it could appear that I produced concrete proof for Neogene changes in the extent of the Congo Basin rain forest on the basis of plant and pollen records. This is, however, not the case.

In my lecture at the workshop I presented paleoenvironmental maps of various Late Cenozoic periods on the basis of oceanic and terrestrial evidence. The possible changes in the extent of the rain forest have been inferred from circumstantial evidence. The results of Caratini and Giresse (*1*) on the reduction of the Congo rain forest 18,000 years ago show that extrapolations I made for preparing of my maps may well be acceptable.

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