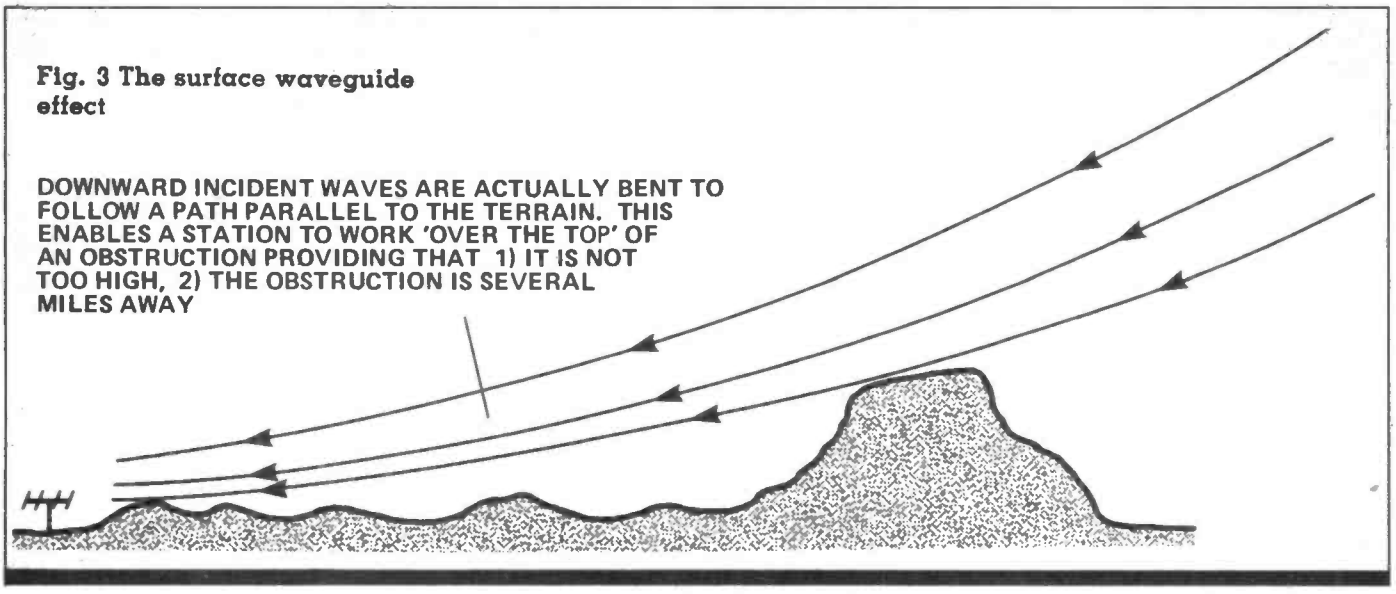
**Fig. 3 The surface waveguide effect**




opposite from the direction you wish to transmit to.

The greater the operating frequency, the greater the bending effects. While a poorly sited station will suffer greater signal attenuation with a rise in operating frequency, refractive, troposcatter and 'surface waveguide' effects will be enhanced. With these peculiar characteristics it is often possible to work more reliable DX on 70 and 23cm than on 2m. It is the superior refractive effects which tend to make UHF operation more interesting than 2m VHF.

Generally, the ground effect requires about five miles of level terrain to be useful. However, there are large areas of the country which fit the category. Gently sloping ground will not constitute a barrier. In contrast, the hills within the mountain ranges of Wales have to be regarded as a very poor location with knife edge diffraction being the only thing which could help.

The ideal location for a station has to be on a high, wide plateau. However, you won't be missing out on the lifts providing that you have a number of miles of flat ground between you and the nearest hill. ●