

**ON THE GRAVITATION STIMULUS IN RELATION TO POSITION.**—When an apogeotropic organ is placed on the intermittent klinostat<sup>1</sup> it is subjected to alternate stimuli tending to make it curve in opposite directions. If the organ is fixed say at an angle of  $45^\circ$  to the horizontal axis of rotation, the organ will, during half the time, point obliquely upwards, and during the other half it will point obliquely downwards. Are the gravitation stimuli equal in these two positions? If so, no curvature will occur, but if Czapek<sup>2</sup> is right in believing that  $45^\circ$  below the horizon gives a stronger stimulus than  $45^\circ$  above, it is clear that the organ must gradually curve towards the horizontal.

Thirty-four experiments were made with grass-haulms (principally those of *Lolium perenne*) fixed at angles varying between  $35^\circ$  and  $55^\circ$  to the horizontal axis of the intermittent klinostat. In four cases no bending occurred, in twenty-seven cases the haulms bent from  $2^\circ$  to  $19^\circ$  towards the horizontal, while in three instances they bent in the opposite direction or laterally. There can therefore be no doubt that grass-haulms obey Czapek's Law in being more strongly stimulated at angles of about  $45^\circ$  below the horizontal than at corresponding angles when the free end points obliquely upwards<sup>3</sup>.

The above observations were made some time ago in ignorance of the fact that Czapek<sup>4</sup> has used the same method in a cognate experiment.

D. F. M. PERTZ.

PHYSIOLOGICAL LABORATORY, CAMBRIDGE,  
October, 1899.

**SOME OBSERVATIONS BEARING ON THE FUNCTION OF LATEX<sup>5</sup>.**—The author has lately returned from a year's sojourn in Ceylon, where he has been acting as scientific assistant to Mr. Willis, the Director of the Royal Botanic Gardens. During his

<sup>1</sup> For a description of the instrument see F. Darwin and D. F. M. Pertz in *Annals of Botany*, 1892, p. 245.

<sup>2</sup> Pringsheim's *Jahrbücher*, XXVII.

<sup>3</sup> The facts also agree, broadly speaking, with Elfving's results, *Acta Soc. Sci. Fennica*, 1880.

<sup>4</sup> *Sitzb. K. Akad. Wien*, Bd. civ, 1895.

<sup>5</sup> Abstract of paper read before the Botanical Section of the British Association, Dover, Sept. 1899.



Pertz, Dorothea F. M. 1899. "On the gravitation stimulus in relation to position." *Annals of botany* 13, 620–620.

<https://doi.org/10.1093/oxfordjournals.aob.a088757>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/232524>

**DOI:** <https://doi.org/10.1093/oxfordjournals.aob.a088757>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/318563>

#### **Holding Institution**

Smithsonian Libraries and Archives

#### **Sponsored by**

Biodiversity Heritage Library

#### **Copyright & Reuse**

Copyright Status: Not in copyright. The BHL knows of no copyright restrictions on this item.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.