

Research Journal of Pharmaceutical, Biological and Chemical Sciences, 2015, vol.6, N6, pages 1655-1659

---

## Lithologic conditions of inundated slope defluction in river valleys of the eastern east European plain

Dvinskikh A., Kurbanova S., Rysayeva I.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### Abstract

The field stationary researches carried out within the last 30 years proved ubiquitous development of soil and ground masses sluggish movements on slopes and in the bottoms of river valleys. Speeds of these movements and their distribution are determined by slope vertical and profile. The purpose of this article is to establish dependence of similar movements on various natural factors intensity. Our own field research data confirm that the maximal speed of friable material shift is observed in clays and heavy loams, and minimum speeds of shift are typical for mild loamy structure deposits. For sand intensity of creep fades so that the size of soil peripheral speed shift is within limiting measurement accuracies. The inundated defluction study showed the shifting of top inundated alluvion depth in a lengthwise direction on the valley bottom and change of this shifting direction with depth. Average peripheral speed of upper inundated alluvion shift, according to results of the plates position concerning the profile line and the fixed reference point in the bottom of exploring shaft, changed from 0,3 to 60 mm \* year<sup>-1</sup>. The maximal shift was observed near waterway bed, and minimum - at the rear seam of the bottom. Intensity of longitudinal shift is in direct dependence on biases of longitudinal profile of the river and alluvion mechanical structure. In the upper alluvion part, a loamy facies inundated alluvion, the average size of shift made 47 mm \* year<sup>-1</sup>. In the bottom part the inundated alluvion within river facies the sandy structure speed decreases to 0,2-0,3 mm/year. From the depth of 1 m speed fades sharply.

---

### Keywords

Creep, Defluction, Flood plain, Inundated alluvion, River valley, Slope