# A lake dammed by a human-induced landslide

Lake Arló in Hungary

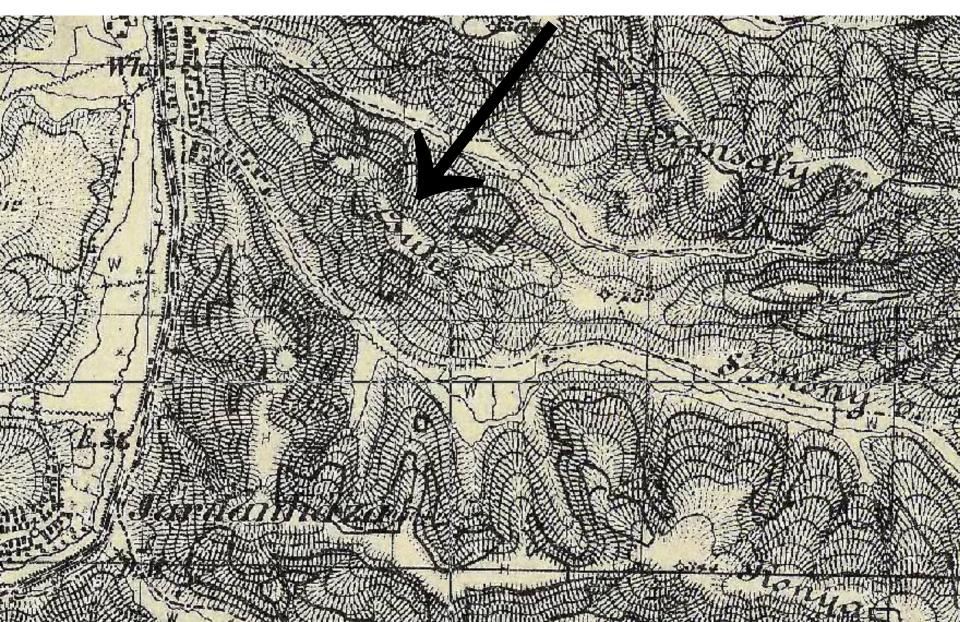
Gábor Gercsák, Budapest, Hungary Eötvös Loránd University

### June 2016

# Aerial photograph of Lake Arló



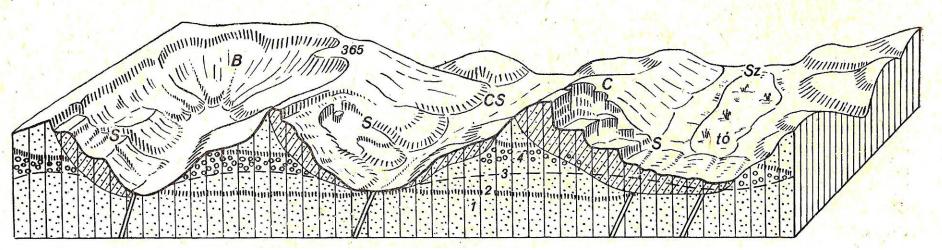
# Third military survey (late 19th c.)



## Start of the failure in 1863



# Block diagram of the area



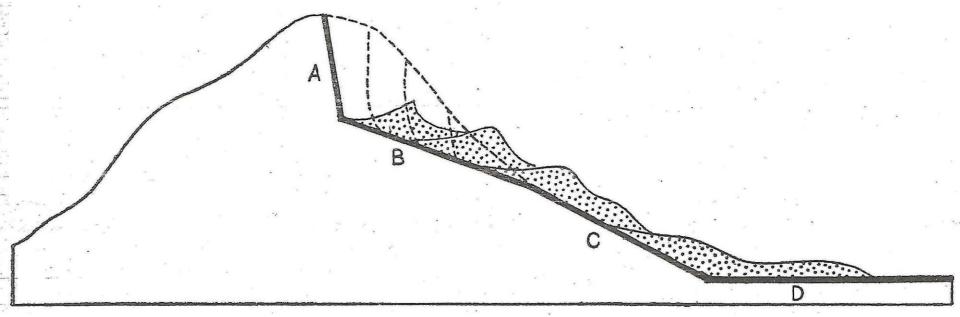
- B = Benéte Valley
- C = Csahó Hill
- Cs = Csahó Valley
- S = Landslides
- Sz = Szohony Valley
- tó = Lake

- 1 Lower Miocene 2 Coal seam
- 2 Coal seam
- 3 Water table
- 4 Loose pebbles under the upper coal seam



**Disturbed mass** 

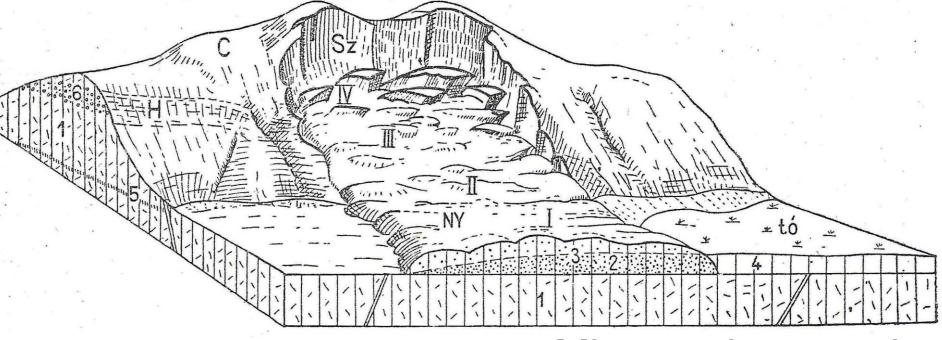
# **Cross-section of the slide path**



#### Bottom to top = 145 m

- A = Fall line
- B = Slide path after the landslide
- C = Original plane of the slope
- D = Original valley bottom (193 m)

# Block diagram of the slide



- C = Csahó Hill
- Sz = Rock wall
- Ny = Tongue
- H = Pebbles
- I-IV = Belts of the slide

- 1 = Miocene base rocks
- 2 = Saturated layer
- 3 = Level of water table
- 4 = Lakewater
- 5 = Lower coal level
- 6 = Pebbles

#### The slid hillside

