12 Permafrost and snow

Solution:

1. Lager closed snow patches are concentrated in the lower and left part of the picture, isolated small snow patches occur in the upper part of the picture. Snow is only in dells – especially between depressed areas and prominent bulges, which make visible the creeping movements on the surface of the rock glacier. The bulge and other convex ground parts are snow-free. The reason for this is, that in winter the wind blows off the dry snow from rides and crests and deposit it in wind-shaded dells. There snow is in such great thickness, that the summer is usually too short to melt the entire mass of snow.
2. The distribution of the snow patches in each image is very similar, except the midsummer picture has significantly more snow than the others, because at this time of year the melting period had not lasted so long.
3. On the one hand this is an effect of the snow-altitude and the prevailing low temperatures, on the other hand this is an effect of the exposition: in shady areas snow and permafrost find good conditions to remain. An important relationship between snow and permafrost is that a long-lasting or even permanent snow cover over the summer is protecting the permafrost from melting.