The east-west oriented, ice-capped Eyjafjallajokull volcano is located at the southernmost tip of the Eastern Volcanic zone, S-Iceland. Three eruptions are known at Eyjafjallajokull during the past 1100 years, the last one occurring in 1821-23. The volcano awoke on 20 March 2010 when a small, basaltic, fissure eruption began on the eastern flank, outside the ice-cap. This three-week-long, effusive eruption was followed by a six-week-long explosive eruption of trachy-andesite that began on 14 April in the ice-filled summit crater and caused local flooding and widespread air-traffic disruption. This eruptive phase was preceded by a 18-year-long period of intermittent swarm activity and crustal uplift, indicating magma intruding into the upper crust and the lower crust. We used high-precision earthquake locations, recorded with the Icelandic national network (SIL) and relocated using a double-difference relocation method, to track magma movements beneath Eyjafjallajokull before and during the 2010 eruptions. The seismicity shows that the recent unrest period began at 20-25 km depth, near the crust-mantle boundary in March 2009 and was followed by small intrusive activity into the upper crust the following summer. Seismicity, accompanied by crustal deformation, picked up again in December 2009, indicated intrusions forming beneath the south-eastern and eastern slopes and culminated in March 2009, before the flank eruption. The relocated earthquakes also show the magma path towards the summit eruption-site and early signs of new deep magma input from the mantle in early May, before the effect of the new material reached the surface and caused increased ash production again.