

Mountains and rocks in Czechoslovakia

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Our country, rich in natural beauties, provides quite good opportunities for the training of mountaineers and for admiring the beauties of mountain and rock areas. Sandstone in Bohemia and limestone in Moravia and Slovakia offer climbs of various grades of difficulty. Our only high mountains – The High Tatras – with typically mountainous walls are suitable for preparing for most difficult climbing in higher glaciated mountains.

Geological and geographical characteristics

Looking at the map of Europe we find Czechoslovakia nearly in the centre of the continent, at the point of connection between the 2 basic geological parts forming continental Europe. Geologically the W part of our territory belongs to N Europe and the E part to Mediterranean Europe. The N, bigger, part of the continent forms a platform reaching only the height of medium high mountains while the smaller S part forms an Alpine system of high mountain ranges from the Pyrenees across the Alps and the Carpathians as far as the Caucasus. In contradistinction to the geologically old N part this high mountain part was created relatively recently by folding from the waters of the once more extensive Mediterranean Sea; it adjoins the S margin of the more solid N complex, some marginal parts of which are mixed into its folded structure.

The 2 approximate halves of our territory are parts of these 2 big structural divisions of Europe, the joint of which runs obliquely across the middle of Czechoslavakia as the big Moravian trough in the line Znojmo-Vyškov-Moravian Gate-Karviná. This trough divides the parallelogram of the flatter and lower Czech highland from the Moravian and Slovak West-Carpathian zone.

The different geological past of both parts of the European continent can also be seen from the appearance of both halves of our territory. In the Czech highland repeated denudations laid bare older minerals; thus there is only a thin coat of Secondary and Tertiary era sediments. On the contrary the Carpathians are formed and over-laid by abundant layers of sediments and the deeper crystalline mineral parts of their structure are denuded only a little. Young volcanic ranges of mountains of the Tertiary era can be found in both parts of the country.

Geological activities finally formed the country which is mountainous, but not high, with both narrow and wide plains of basins and marginal lowlands both in the centre and at the margin. The mountains do not reach the heights at which glaciers can form and the lowlands do not descend near to sea-level. From this moderate relief rivers flow down without any considerable unevenness. In fact, only small parts of the Slovak mountains do not conform to this general picture. The highest point of our country is Gerlachovský štít (Gerlachov Peak) in the High Tatras (2655m); the lowest one is the effluence of the river Bodrog in Eastern Slovakia (94m) – this also characterizes the Carpathian part, whereas in the W part of our territory the differences are smaller

26 The Dresden Tower, Prachov Rocks (This and next three photos: J. Jurak)

(Sněžka 1692m, the effluence of the Elbe near Hřensko 115m). More than half the area of the whole state is covered by low hills between 200-600m. Only a small part (not even as much as 4 per cent) reaches heights of more than 1000m.

Rock areas in Bohemia

As the High Tatras – the only accessible high mountains – are considerably remote for Czech mountaineers, their training and climbing activity is orientated to relatively small rocks in lower zones. The rocks are scattered on the slopes of the mountains, in the woods, in the river valleys, not so frequently on the tops of the hills. Both their articulation and their geological structure are outstandingly diverse. They consist mainly of lydithes, conglomerates, limestones, partly of granites, gneisses and slates; nevertheless it is the cretaceous sandstones that are of the greatest importance, forming magnificent rock towers. The routes are permanently secured with fixed pitons and in some places also marked. To indicate the grade of difficulty Alpine 6 grade scale is used except in the sandstone areas. Here, the Saxon 7 grade scale is used.

Rocks in Bořeň. The rocks in Bořeň belong to the most important and interesting non-sandstone terrains. The hill of Bořeň (539m) lies about 2km S of the town of Bilina. It is the highest volcanic formation in the NW margin of the Czech Middle-Mountains. Geologically it is a phonolith; the denuded NW slope is of para-gneisses, the original mineral before the phonolith pierced through.

The rocks in Bořeň are an ideal place for all kinds of climbs. They consist of buttresses, walls and chimneys; ridge climbs are few. They are suitable for training and the use of all kinds of climbing techniques, especially pegs and other artificial aids. Mainly on the N walls there are difficult ascents of nearly high mountain character (up to 8 pitches). Some routes are provided with fixed pitons, mainly in the parts where re-placing of pitons might considerably damage the rock. The whole area of Bořeň is a national nature reservation because of rare vegetation.

Sandstone rock towns. Sandstone rock towns in N and NE Bohemia have become a real paradise for climbers. Thanks to the climbers, all are perfectly investigated, mapped and all the towers comprising them have been named. At first sight their sides seem to be smooth and unclimbable. If we come nearer however, we can see that there are thousands of small knolls, rises, protuberances, cracks, 'honeycombs', 'laces' and sand-glass like holes, all being the result of a continual erosion activity.

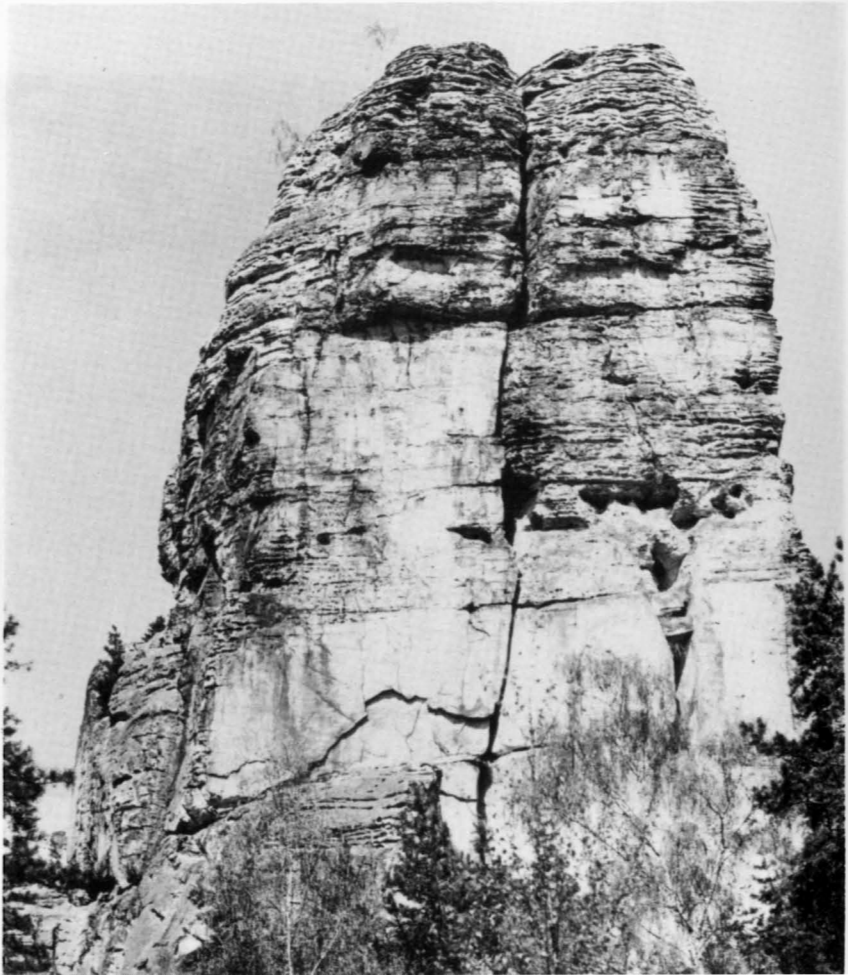
Sandstone rock climbing has its own specific features. It differs from high mountain climbs mainly in the manner of climbing and securing. No artificial means are used in this type of climbing. Only rock formations resulting from natural erosion can be used as holds. 'Rings' fixed to the rock (solid cemented iron pitons with a ring) serve exclusively as anchoring points. Between rings, securing is done only with the help of knotted loops which are put into the cracks, or drawn through holes called 'clocks' or hung on the knobs and spikes.

Conscious self-restriction and consistent adherence to a well thought out

set of rules are specific features of sandstone climbing which were first laid down in 1913 by the Saxon mountaineer Rudolph Fehrmann and have not changed in their substance. As for the quality of experience the sandstone tops are no less significant than the Alps or even remoter and higher mountain ranges. Mountaineering experience, conscious recognition and extension of the bounds of one's own possibilities cannot be found anywhere else in as pure a form as here on the sandstone rock. Undoubtedly here we experience typical mountaineering activity of self-sufficiency and proving one's abilities and confidence in the company of other friends/climbers, and last but not least, have also impressive countryside, the contrast of steep rocks and more gentle surroundings, natural beauty and solitude. Only those looking for ice climbing and snow tops cannot be satisfied here.

For comparison: a 2-man team that wants to climb the 1100m high NW wall of Civetta in the Dolomites, must count on 10-12 hours and will need relatively heavy equipment. The longest of these sandstone climbs on a rock 100m high can be done in 4 hours without any load. Even if the requirements are quite different, neither of them can be denied esteem.

27 Majak (Lighthouse) at the rock town of Hruba Skala



The most important groups of rock towers are:

Prachovské Skály (Prachov rocks) reach a height of about 400m above sea-level and lie about 7km NW of Jičín. Their outstanding feature is their large vertical extent, the largest of all the groups of rock towers, and containing a considerable number of slender towers in a small area. Their sides are engraved by chimneys, fissures and clefts and the sandstone is relatively solid. There are about 130 towers; the best-known are called Prachovská Jehla (Prachov Needle), Krkavčí Skály (Raven Rocks), Skautské Věže (Scout Towers), Drážďanská Věž (Dresden Tower), Americká Věž (American Tower), Mnich (Monk), etc.

Hruboskalské Skalní Město (The Rock Town at Hrubá skála). This name denotes a vast sandstone formation 6km SE of Turnov. It is the largest rock group of the Czech Paradise. Sandstone towers emerge from the bottom of gorges up to a height of 60m. In contradistinction to the Prachov Rocks, these towers have enough room to let their massiveness and beauty excel. The Rock Town at Hrubá skála is divided into 4 main groups: Dračí Skály (Dragon Rocks), Kaspelník (Bandmaster), Maják (Lighthouse) and Dešťové a Hadí Údolí (Rainy and Snakes Valley). The best-known towers, of which there are 200 altogether, are: Kapelník, Taktovka (Baton), Maják, Lebka (Skull), Sfinga (Sphinx).



28 The Dry Rocks

Suché Skály (Dry Rocks) is a huge compact crest of older sandstone towering above its surroundings about 3km SW of Železný Brod. The character of Dry Rocks is quite different from the other rock towns. The crest is sharp and wildly rugged; the sandstone is hard, very coarse-grained, and corrodes slowly. The crest of Dry Rocks is divided into 3 parts by 2 deeply cut gaps. In the W rises the massif of Sokolí Věž (Falcon Tower), in the middle Střední Věž (Middle Tower) and in the E Hlavní Věž (Main Tower). To the S the steep walls of the crest drop 60m while to the N they slope down to 20m.

Skály na Mužském (Rocks in Mužský). These form a sort of cliff in the SW of the Czech Paradise. A formation worth noticing is Kobyla (Mare), a tower about 40m high, overhanging in its upper part which resembles a horse's head.

Teplicko-Adršpašské Skély (Teplice-Adršpach Rocks) is the largest rock town in Czechoslavakia, spread over an area of nearly 30 square km NW of Teplice-on-the-Metuje. They differ morphologically from other sandstone groups having compact and massive walls reaching heights of up to 100m. In a unique concentration there are side by side colossal slender towers, columns, obelisks and rock blocks. By now 520 independent towers have been mapped, of various forms and names, e.g. Milenci (Lovers), Starosta and Starostová (Mayor and Mayoress), Cukrovarský Komín (Sugar-mill chimney), etc.

Děčínske Stěny (Děčín Walls) are situated near the Czech frontier in the most N part of Bohemia. They are part of the Elbe Sandstone Mountains in Germany. Because of its picturesque beauty this part of the countryside is also called the Czech-Saxon Switzerland. The best-known are Tiské Stěny (Tisá Walls) approximately 15km W of Děčín. Near to Hrensko there is Pravčická Brána (Pravčice Gate), enjoying a reputation as the biggest rock gate in Europe. It is a huge arch in sandstone 19m high, at its base 26m wide. It lies about 5km from Hřensko at 438m above sea-level.

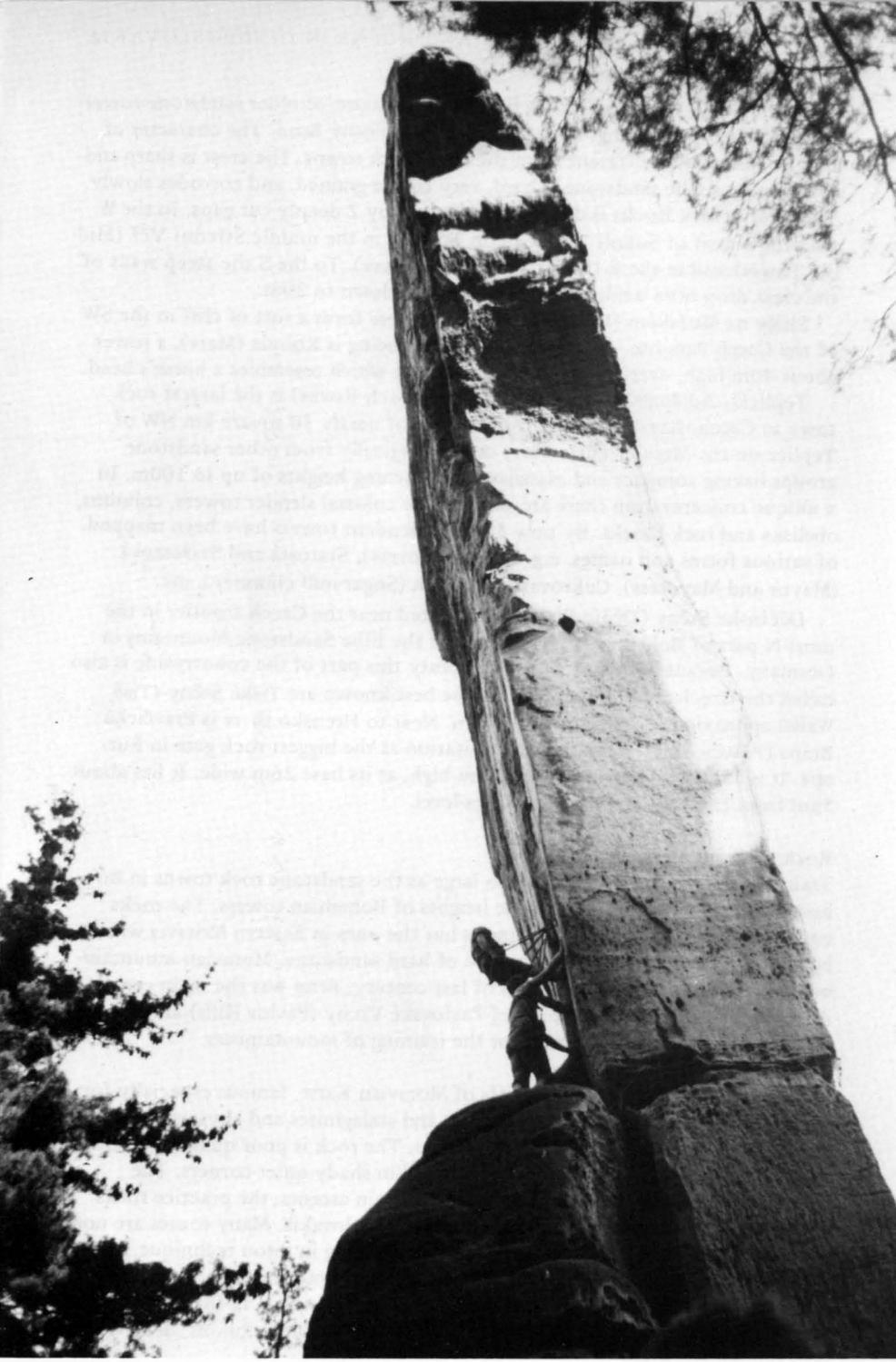
Rock areas in Moravia

Training rocks in Moravia are not so large as the sandstone rock towns in Bohemia and mostly do not reach the heights of Bohemian towers. The rocks consist mostly of limestone and gneiss but the ones in Eastern Moravia which belong to the Carpathian structure are of hard sandstone. Moravian mountaineering began to develop at the end of last century; Brno was the main centre. At that time the limestone rocks of Pavlovské Vrchy (Pavlov Hills) and the Moravian Karst were discovered for the training of mountaineers.

Moravian Karst. The limestone cliffs of Moravian Karst, famous especially for their fantastic world of caves, stalactites and stalagmites and abysses are situated in narrow wooded valleys NW of Brno. The rock is poor quality and the climbs are often hidden among the trees and in shady quiet corners. The lengths of the routes remind us of high mountain ascents; the practice rocks are regarded as the most difficult ones in Czechoslovakia. Many routes are not provided with fixed pitons and thus provide training in piton technique.

The basic material of the geological structure is limestone resulting from sediment which settled to the bottom of the Devonian Sea. In the period when all the area was denuded, the formation of caves, swallets, siphons, deep valleys and gorges began.

The best-known rock formations are Býčí Skalá (Bull Rock), the walls of



29 The rocks in Muzsky Kobyla

Pustý and Suchý Žleb (Barren and Dry Groove) in the Punkva valley and around Sloup. Climbing the walls of the world-famous abyss Macocha, 139m deep, considered to be one of the most difficult of training rocks, has always attracted climbers because of their massiveness, difficulty and the romantic scenery of the surroundings. The main wall had resisted for many years until it was climbed in 1944 and 1946; this is regarded as one of the most important events in the history of Brno climbing.

Other remarkable rock areas are Čtyři Palice (Four Pestles) and Drátník in the Českomorvaská Vysočina (Czech-Moravian Highlands), rocks in the valley of the Jihlava, Velký and Malý Rabštejn (Big and Little Rabštejn) in the Jeseníky-mountains. Gneiss is predominant here. Even smaller rocks of flysch sandstone scattered in the zone of the Moravian Carpathians are frequently used for climbing. The best-known Moravian mountain range – the Beskydy – is rather poor in rock formations. The rocks of Palava (Pavlov Hills) are described below.

Mountains and rocks in Slovakia

Slovakia is a mountainous country, penetrated by mighty bends of the Carpathians. Although the mountains with the exception of the High Tatras and parts of the Robáče lack high mountain character, many rock peaks can be found here. These have not been used for climbing because of their remoteness and the proximity of the High Tatras; they are mostly of limestones and belong to the cliffs which edge the whole length of the central crystalline part of the Carpathians.

Crest traverses of the Malá and Velká Fatra (Little and Big Fatra) and the Nízké Tatry (Low Tatras) are very popular with climbers both in summer and winter so as to acquire good practice. One of the most demanding is the winter traverse of the main crest of the Západní Tatry (Western Tatras). This crest is 42km long and gives about 5000m of climbing while reaching 32 tops around 2000m high.

Impressive rocks, which are the most frequently visited, are those in Manínska Tiesňava (Manín Strait) situated 5 km NW of Považska Bystrica. Manín Strait is a limestone canyon washed out by the waters of the brook Teplanka, which divides the hills Velký Manín (890m) and Malý Manín (Big and Little Manín). There is a wide choice of both easy and very difficult climbs, the latter ones on overhanging walls lasting up to several hours. The highest are Pekelná Stena (Infernal Wall), Gotická Stena (Gothic Wall), Manínska Stráž (Manín Guard) and Stratené Veže (Lost Towers).

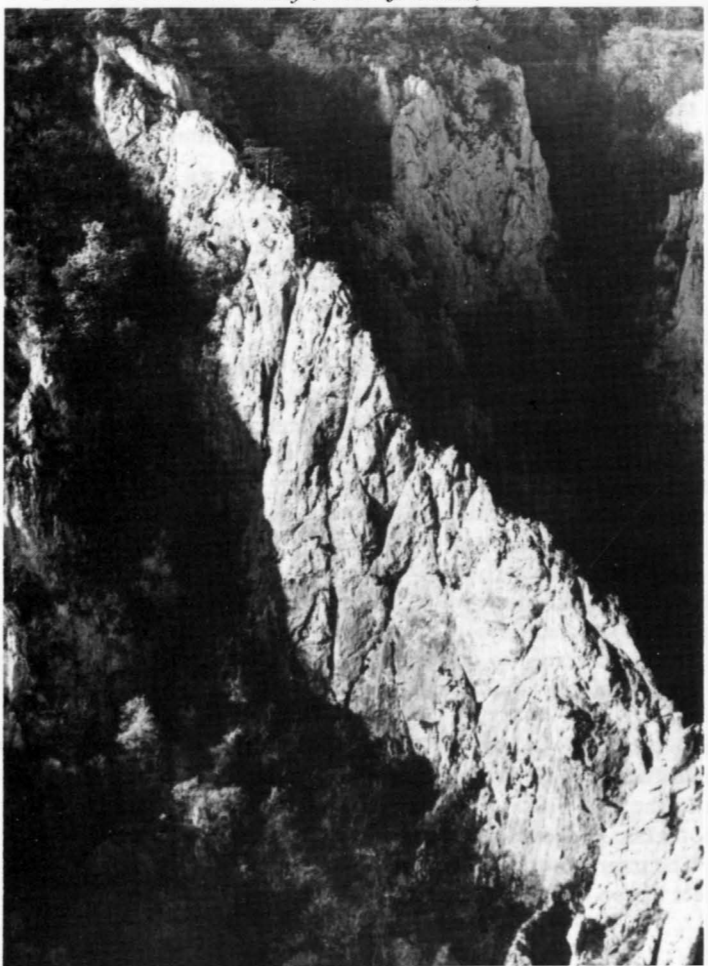
The rocks near Porúbka in the valley of the rivulet Rajčianka approximately 10km S of Žilina are traditionally a training place for climbers from Žilina and Martin. The rocks here, also of limestone, are extensive though not particularly high. Their advantage is an easy approach and well marked climbing routes.

The rocky parts of the Malá Fatra (Little Fatra), which are considered to be our most beautiful mountain range are situated in an impressive setting immediately next to the High Tatras. They are massive, but seldom visited because of their remoteness. The rocks are of limestone and dolomite, in some places very friable. The impressive, wildly rugged dolomite peak of Velký Rozsutec (Big Rozsutec) has on its W flank a 120m high, vertical and very smooth wall

which was climbed only recently. Other well-known places for climbing are Ťava (Camel) and Mnich (Monk) in Vrátna Dolina (Vrátna valley) and Sokolie Veže (Falcon Towers) in the Obšívanka valley.

The largest practice rocks in Slovakia are limestone cliffs in Zádielská Dolina (Zádiel valley) in the Slovak Karst. This most extensive karst area in our country is situated near the S frontier about 50km W of Košice. Zádielská dolina is a typical karst canyon 3km long. It was formed by the intense erosive activity of the brook Blatnica. Vertical limestone walls reach heights of up to 300m. The bizarre form of Cukrová Homole (Sugar Loaf) towers isolated in the valley. Other interesting formations are Orlí Bašta and Veža (Eagle Bastion and Tower), Čertova Skala (Devil's Rock), Kozí Chrbát (Goat's Back) and others. Massive rocks, ribs, walls and independent towers face the valley with their slopes, while on the other side they are surrounded by an upland plain. The climbs are mostly of a high mountain character, some of them lasting several hours. Zádielská dolina is distinguished on account of its vertical vegetation zones. There is very rich mountain and steppe flora, which is why this area has been declared a protected nature reservation.

30 Goat's Back in Zadiel Valley (Photo: J. Csonto)

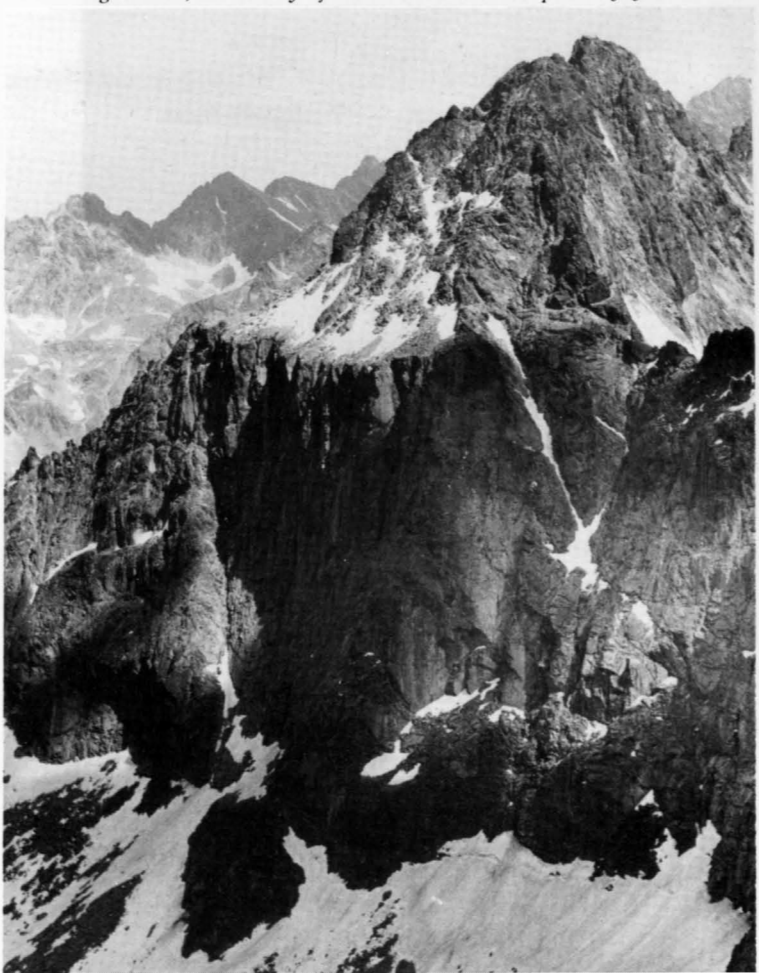


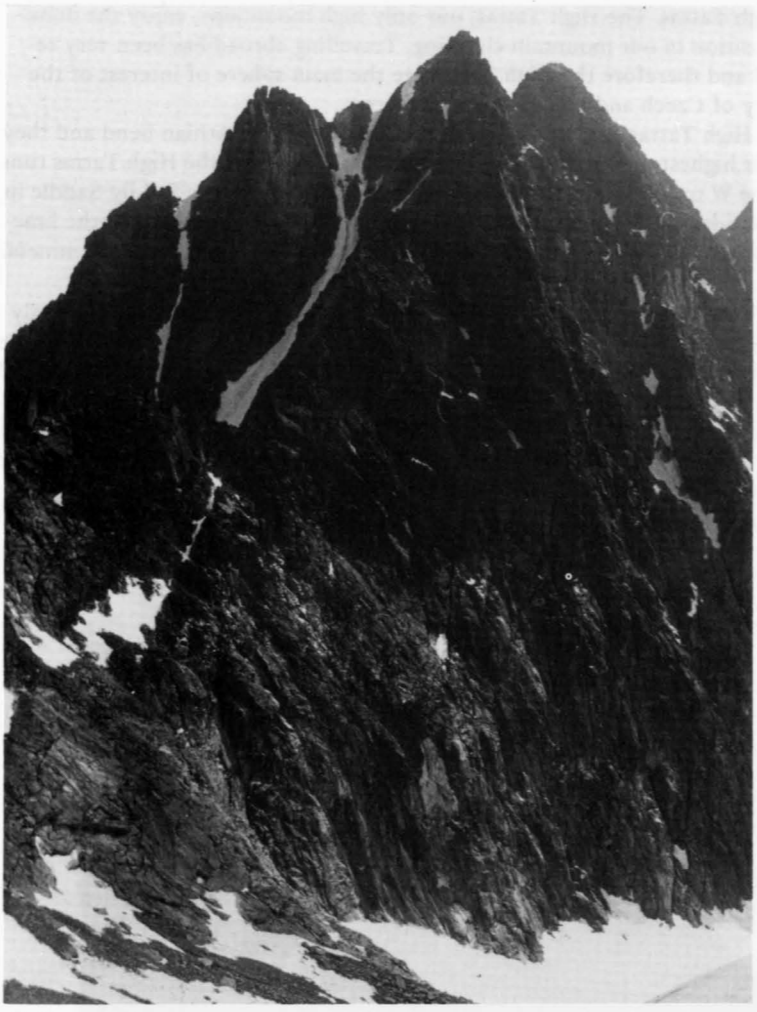
The High Tatras. The High Tatras, our only high mountains, enjoy the dominant position in our mountain-climbing. Travelling abroad has been very restricted and therefore the High Tatras are the main sphere of interest of the majority of Czech and Slovak mountaineers.

The High Tatras are situated in the N part of the Carpathian bend and they are their highest mountain ridge. The longitudinal axis of the High Tatras runs from the W to the E, but the main crest bends slightly to the S. Lily Saddle in the W divides them from the W Tatras; in the E Kopské Saddle from the limestone Belianské Tatras. The main ridge is 26km long, the predominant mineral granite.

The best view of the High Tatras is from the S because here they suddenly and unexpectedly rise from the Spiš basin. The impression is intensified by the fact that the highest peaks (Gerlachovský štít 2655m and Lomnický štít 2632m) are not situated in the main ridge, but in short side ridges running to the S. Nor do the peaks Kriváň (2496m), Satan (2432m), Bradavica (2492m), Slavkovský štít (2453m) and Kežmarský štít (2556m) lie on the main crest. There are more than 300 Tatras peaks and towers.

31 The High Tatras, the Gallery of Ganek (This and next photo: J. Jurak)





32 The N walls of Javorovy Stit, High Tatras

Although the present Tatras reach the height of the permanent snow-line (about 2300m), there are no glaciers as are found in other high mountains. Above this level the slopes are so steep that the snow cannot remain on larger surfaces. There are only permanent firn fields as in Ladová dolinka (Ice Valley), Medená kotlina (Copper Basin), etc.

Mountaineering in the High Tatras underwent the same development as that in the Alps, with of course about 30 years delay. Extreme technical climbing had its climax in the sixties, while today the accent has moved to free climbing. The difficulties overcome in free climbing reach the level of top climbs on the sandstone. Winter mountaineering has also become very popular.

The most remarkable Tatras walls are as follows:
NW wall of Galerie Ganku.

This name denotes neither a top nor a peak, but an interesting natural formation in the NW slope of the peak, Malý Ganek. About ⅔ of the way up a massive debris gallery has formed across the whole of a wall. The upper part over the gallery is easy and not interesting. The lower part is approximately 280m high, quite vertical and overhanging in its upper part. It is considered to be the most difficult Tatra wall. At present there are 12 climbing routes, mostly extremely difficult. The approach under the wall is from the camping site in Bielovodská dolina (White Waters Valley) or from the chalet under the peak Rysy across the saddle Váha.

The W wall of peak Lomnický štít.

This wall is prolonged to the right, 300m high in the middle and 400m high on the right-hand side. In the central part there is a huge overhang in the form of an ice-hockey stick called Hokejka. The rock is solid and so considered one of the most beautiful wall climbs in the High Tatras. The approach under the wall is possible only from Téry's chalet in Malá Studená dolina or descending from the top on the NW ridge. There is a cable way to the top of Lomnický štít. On the wall there are 17 routes classified V to VI.

The N wall of Malý Kežmarský štít.

To the valley of Dolina Zeleného from Malý Kežmarský štít (2513m) extends a NW rib 1000m long and a 900m high N wall which is crossed in the middle from the left-hand side upwards by a debris shelf called Německý žebřík (German ladder). The highest Tatras wall is thus divided into 2 parts. The upper part over the German Ladder is relatively compact and not so steep, the lower part is steeper and furrowed by huge buttresses and chimneys. A well-known ascent is Stanislawski's route up the middle chimney; on the left buttress there is a *direttissima* and a *super-direttissima.* At present there are 20 climbs classified V to VI on this wall. The approach under the wall is very easy, about ½ hour from Brnčal's chalet.

The High Tatras also provide numerous beautiful climbs of intermediate and lower grades of difficulty both in summer and in winter. The traversing of the main ridge is also a favourite. It is a demanding tour in winter, lasting for weeks, and has been carried through only a few times using expedition-like tactics.

The north of England Himalayan expedition—1975

Paul Bean

Paul Bean (leader), Dawn Bean, Mike Hosted, Mike Anderson (New Zealand) and Terry Funk (Switzerland) arrived in Kabul on 15 June after a slow and eventful drive along the now well-known Himalayan highway. Formalities were dealt with in record time and we drove our Transit N to the end of the surfaced road at Kunduz. Here we hired a small 4-wheel drive Russian truck for the 3½-day journey of adventure to Eshkashem. Our chosen area was the Darrahe