The Jura mountains extend in the form of a crescent from the Rhine valley of Basle to the Rhône by Lyons. To the W is the valley of the Saône, to the E the Swiss plateau with the high peaks of the Alps beyond. In the N the Belfort Gap separates the Jura from the Vosges. The length is some 150 miles, the breadth 30 miles in the centre, tapering to only a few miles at the extremities. The Franco-Swiss border cuts haphazardly across the range paying little attention to the details of the relief. The region, has given its name to a geological period—the Jurassic (120 to 150 million years ago); the rocks are mainly oolitic limestones, but with some sandstones and shales.

The Jura provide a classical example of folded mountains, the parallel ridges (monts) and valleys (vaux)—the anticlines and synclines of the folding—following the general trend of the massif over long distances, like ‘breaking waves suddenly stilled’. In these longitudinal valleys there are numerous lakes. Transverse valleys, called cluses, cut by streams which were already there before the folding took place and were able to maintain their original courses by down-cutting, interconnect the longitudinal valleys to produce a strange drainage pattern. (The Doubs, for example, rising only 50 miles as the crow flies E of its confluence with the Saône flows first NE through the Lac de St Point, then by a magnificent cluse to Pontarlier. Continuing to follow the trend of the range, it forms the Franco-Swiss border through the Lac de Chaillelexon and the Gorges du Doubs, finally entering Switzerland. Now there is an acute bend to the W, followed soon after by another to the N leading to Montbéliard. Here again the direction changes abruptly becoming SW; the river flows round a great loop at Besançon and finally reaches the Saône after a course of no less than 250 miles.) The cluses are often narrow and steep-sided, in marked contrast to the vaux.
In many places swift torrents, known as ruz, have carved deep ravines in the anticlines and sometimes these have even cut back far enough to form a high depression (combe) along the crest. The craggy escarpments round the gently sloping floors of the combes are called crêts; all the highest summits are of this form. These escarpments and the side walls of the gorges and cluses provide the climbing rocks, rising above the conifer forests which clothe the easier-angle hill-sides. One-third of the whole range is in fact afforested.

The folds are steepest and highest in the E and S, and here are found the major summits. Many of them are in Switzerland, but a quirk of border arrangement has placed the highest, Crêt de la Neige (1718 m), in France, even though it is only 10 miles from Geneva. Reculet on the same ridge is only one metre lower and there are many others over 5000 ft (1520 m). To the N and W of the range the terrain is less sharply folded, taking the form of a plateau rather than of well-defined parallel hill ridges. The predominance of limestone has led to the formation of steep-sided gorges with caves, swallow-holes and underground rivers—impressive cave country, particularly in the valleys of the Loue and the Lison.
Many Jura hill-tops give notable views across the Swiss plains to the Western Alps, panoramas which have impressed travellers throughout the ages.\(^1\) The best-known viewpoints are Le Chasseral 1607 m (above Lac de Bienne; road access to 1548 m), the Dent de Vaulion 1483 m (near Vallorbe; chair-lift from Lac de Joux), La Dôle 1677 m, Mont Rond 1614 m and Colomby de Gex 1689 m (all above the w end of Lake Geneva) and Grand Colombier (looking down on the Rhône beyond Bellegarde; road access within 200 m). There are fine views too from some of the main roads, notably the Vue des Alpes between La Chaux-de-Fonds and Neuchâtel, the Col de St Cergue between les Rousses and Nyon, and the Col de la Faucille between St Claude and Geneva.

The Jura is popular ski country, with Métabief and Les Rousses the principal resorts. Just under 300 miles from Paris, it is somewhat more distant from the capital than the Auvergne. *La Montagne* (December 1969) described a 'haute route' for skiers of some 70 miles. While not a major caving area, there are nevertheless several hundred sporting caves, some up to 350 ft deep and up to 1 mile long.

There is a great deal of rock climbing in the range, an impression of which is given by Maurice Brandt in the second part of this article.

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What a debt of gratitude we owe to nature for sprinkling the Jura with rocky crests and walls which rise up from the green carpet of its pastures and forests! These rocks have seen the start of the career of many a young mountaineer,

\(^1\) The curious effect on Hilaire Belloc of the view from the Weissenstein is commented upon in *AJ* 77 8.
eager for physical exertion but lacking the means to get to the Alps. It is a modern outdoor salon where one chats, often very loudly and rarely about anything other than climbing; even a fifth degree route will not moderate that kind of exuberance entirely.

Nowhere else are there rocks like those of the Jura. They are modest, perhaps, compared with others, but they cast a magic spell on those who discover them. The warm odour of the rocks, the essence of the pines, the clumps of tiny yellow flowers in the crevices, these are similar to our impressions of the high mountains. The wall-creeper with its red and grey wings is very lively here, unaffected by our over-developed society. The raven, the marmot, the chamois and the ibex are also to be found at ease in their native habitat.

To appreciate the impression these mountains give of a meridional climate one must come from a country with long winters and dull days. The clumps of daphne on the Schilt, the maidenhair fern on the Aiguille de la Morte, the gentians of the Roches Blanches, the shadberry bushes of the Sommètres, the ubiquitous lizards, all serve to transport you in the most unexpected way from your accustomed surroundings. One can see the Jura flamboyant in autumn and, without regretting the passing of the summer, feel the nostalgia of the dead leaves. Sometimes the winter holds off and bestows on the higher regions a stay of sunlight up to Christmas. This upsets the cycle of the flora; the butterflies betrayed by their instincts plunder the last of the flowers; the temperature is pleasant. An ochre carpet made of leaves and lengthened shadows is the setting for the final climbs of the year.

Most people give up climbing in the month of December, when ski-ing creates a new pole of interest. For some, however, holidays last all the year round,
because they discover the winter rock-face. The hazards are much greater, for now one is out of this world. An abseil from the Grande Tête de Moutier, plastered with ice and in a fierce snowstorm, is unforgettable. A solitary climb to the Schilt remains a precious memory, so does the Dalle Bleue, all icy and the situation complicated even more by a hail-storm which concealed all the holds.

There is a type of Jurassian climber, an enthusiast, who will be completely satisfied with what the Jura offers him. He is a rock climber who is not attracted by the routes of the Alps. There is another kind of Jurassian to be encountered everywhere, he is very enterprising and is a raider of the great Alpine routes. Both these types climb the Jura with the same awareness; the second, however, chooses carefully the course which suits him. If he contemplates the N face of the Petit Clocher du Portalet or the E face of the Capucin, he will pick the great artificial routes; Creux du Van (higher than the Portalet!), Pilier de Court, Aiguille de la Mort, Theusseret, Glatti Flue. If his objective is the NE face of the Badile, a trial on the Dalle de St-Imier is indispensable. If the Walker Spur disturbs his dreams, he will get some training on the faces of the Plagne and the Rondchâtel.

There is an extraordinarily large number of routes to climb, most of them described in the climbers' guide-books. Everyone must exercise his own choice. The great classic aretes (Raimeux, Sommètres, Balmflue), which are climbed frequently and have their holds polished by innumerable ascents, no longer attract the Jura enthusiast. Nowadays the young climber seeks other surroundings and greater excitement. The overhanging routes are more worthy of his capabilities; Pilier de Court, Petit Capucin, Grand Toit de Plagne, Theusseret, Aiguille de la Mort (w face), Creux du Van. He seeks the most elegant routes, those which give a new impression of being limitless. The expansion bolt has made it possible to solve some of the most difficult problems; without it the Glatti Flue, for example, would still be unclimbed.

Thanks to the rocks right on his doorstep, the local climber always lives in climbing territory. In the height of the season when the plain swelters in the heat, he ropes up at the end of his daily toil and climbs. What wonderful evenings there are in the scent of the broom and the shadberry bushes, in pursuit of lizards shimmering in the heat! Good routes by which one can reach the summit by twilight to see the sun disappear into a glowing horizon! Opportunities for attaining complete freedom from the cares of everyday life! Certainly the Salève and Fontainebleau enjoy a European reputation; if one could only render to the Jura similar titles of nobility!

The climber in the Jura is aware of the privilege which is his. A privilege which he would willingly share with climbers from elsewhere, if they were not reluctant to make the journey there when bad weather blocks the Alps. It is said all too often that the Jura routes are too short. Anyone who tackles the Grand Toit de Plagne or the left-hand route on the Pic du Theusseret does not wish it to be any longer!
From the top of 4000-m peaks in the Valais one cannot judge the Jurassian routes. It is necessary to go there in the company of someone who knows them, who will instil a respect for the small rocks and a love for concentrated difficulties. You will learn to appreciate a route equipped with an adequate number
of pitons and you will return completely charmed by the country and its inhabitants.

You will have appreciated the astonishing quality of its rock, and been surprised by the impression of space which the routes rapidly acquire. The alternation of artificial and free passages of climbing will have enchanted you. If you can manage them, you will have tackled the outstanding routes, which are the Face de Plagne for free climbing, the Dalle de St-Imier for delicate climbing and the Creux du Van for artificial. These are the longest of their kind. If these more than impress you, then choose the Schilt, the Dalle de Court and the Aiguille de la Mort. You will always be able to find something appropriate to your competence. Only on rare occasions will atmospheric conditions prevent you from climbing. If it does rain there are enough overhangs to shelter you. You will become familiar with the most picturesque cliffs; the Losanges, the Marches d'Éléphant, the Vire de la Fanfare, the Passe trois secondes; and even if you are defeated by the Boîte à Singe or the Cercueil, you will have enriched your memories. Moments of strenuous life under the sky of four seasons! Rock-faces under the icy blast of winter, beneath the snow, the sun, the rain! You will have become hardened and will have proved that it is not the altitude which creates the pleasure of climbing, but rather the mastery of the task you have fixed for yourself. The target need only be 50 m high if it suffices to quench your thirst for adventure. If I had to choose between 800 m of scree at 4000 m and 20 m of pure climbing here, I would opt very promptly for the Jura. You would do well to visit it too.

You will never forget it. From the mists of the plain your memories will return; you will see once again the flamboyant autumn colours and the deep blue of the sky. You will return in spirit to your climbing routes, to the moves which enabled you to surmount a particular pitch. You will picture all the pitons which mark the way, rusty as well as new. You will inhale the perfume of the spring flowers and feel the caress of the evening breeze. You will relive the moment when you were already committed and then had great difficulty in regaining your étrier. You will relive the moment when the hold you had been striving so hard to gain turned out to be an illusion. And, if you have had such a privilege, you will remember for a long time the moment when your perseverance at last enabled you to complete a new route.

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(The second part of this article—by Maurice Brandt, translated by I. V. White—has been adapted from an account in Les Alpes by permission of the Editor.)