

Impacts of nature-based activities on biodiversity

Deliverable 1.2.1

Annexes



Annex 1 - Results and Discussion

D.1.2.1 - Impact Report of Nature-Based Activities on biodiversity

The results of the annual analyses are reported below for each species studied, followed by a brief general comment. The data refers to the entire territory of the Park.

Chamois Rupicapra rupicapra

YEAR 2019

| YEAR 2019 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 38 | 1400 m - 2250 m |
| Spring | 52 | 1600 m - 2450 m |
| Summer | 43 | 1600 m - 2750 m |
| Autumn | 32 | 1700 m - 2500 m |

Table A.1 Seasonal observations of chamois in 2019

Data from 2019 (Table A.1) show that the species occupies a dynamic altitudinal range starting at 1,400 m in winter (minimum recorded altitude) and expanding towards high-altitude grasslands in summer. The minimum number of observations is recorded in autumn (32), while spring is the period with the highest number of observations.

During the winter and autumn seasons, the species is more prevalent in the Champorcher areas (south of the park boundaries). These areas are characterised by trails with no or very low visitor numbers. In the Champdepraz areas, individuals systematically stay away from the trail network or near little-used paths. Even in spring, the data show a preference for the southern sector of Champorcher and the related border areas of the park. Sightings occur almost exclusively in areas far from trails or where anthropogenic pressure is zero/very low. In the summer season, a more homogeneous spatial redistribution is observed between the different valleys, with a concentration in the central sector. The data show that, as the species climbs in altitude, it frequents undisturbed areas, favouring areas where the trails show no signs of use or where disturbance is minimal. Many individuals are reported far from the official trail network.

Analysis of the 2019 data for the chamois confirms the trend in reports made by the surveillance corps in other years studied and shows that the species is not reported in areas with medium to high visitor numbers, preferring areas where trail usage data is low. Summer is the only period of even distribution across the valleys, but the areas of presence remain linked to areas with low human impact and at higher altitudes. The southern sector of the park in the Champorcher valley is confirmed as the area where the species is most frequently reported during three out of four seasons when visitor numbers are lowest.

YEAR 2020

It should be noted that the significance of the observations reported in Table A.2 is strongly influenced by the dynamics of the Covid-SARS pandemic, which has affected both human pressure on the trails and the methods of data collection.

| YEAR 2020 | | |
|------------------|-------------------------|-----------------------|
| Season | No. Observations | Altitude range |
| Winter | 38 | 1500 m - 2450 m |
| Spring | 40 | 1350 m - 2750 m |
| Summer | 30 | 1650 m - 2750 m |
| Autumn | 73 | 1550 m - 2750 m |

Table A.2 Seasonal observations of chamois in 2020

In winter, spring and autumn, the species is more prevalent in areas with very low visitor numbers or in areas far from the trail network (Table A.2). In winter, it is also found just outside the park boundaries (southern area), but still in areas with low visitor numbers. In summer, despite a more even distribution across the valleys in the central area, observations continue to show that the chamois reaches higher altitudes and consequently avoids trails with high or very high visitor numbers. Once again this year, the Champorcher area proved to be the most popular in the winter, spring and autumn seasons.

Observation data for the species for 2020 confirm that the species is distributed throughout the Park according to seasonal variations and generally in areas with low human traffic. The southern areas of the Champorcher sectors are the main areas where the species has been observed. Autumn is the season with the highest number of observations, while spring shows the greatest altitudinal range (1350-2750 m).

YEAR 2021

The significance of the observations reported in this analysis (Table A.3) is strongly influenced by the Covid-SARS pandemic, which affected both the use of trails and the continuity of monitoring activities by the surveillance corps.

| YEAR 2021 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 60 | 1250 m - 2550 m |
| Spring | 68 | 1600 m - 2800 m |
| Summer | 34 | 1800 m - 2800 m |
| Autumn | 52 | 1450 m - 2650 m |

Table A.3 Seasonal observations of chamois in 2021

As in previous years, in line with the behaviour of the species and seasonal climatic variations, observations show an altitudinal rise of the species as the warm seasons progress (up to 2800 m in spring/summer), followed by a descent to lower altitudes (1250 m) during the winter (Table A.3).

As in 2024, 2023 and 2022, analysis of the data observed in 2021 continues to show a possible inverse correlation between the presence of the species and the intensity of human traffic along the trails. The distribution of the species also appears to be linked to the intensity of human traffic on the park's trails, highlighting an apparent preference for areas with low disturbance.

- Winter and autumn: Individuals are mainly concentrated in the Champorcher sector. During these seasons, chamois frequent trails with very low usage data or areas completely distant from the trail network. Individuals are also reported just outside the park boundaries in the southern areas, in areas characterised by low human activity.
- Spring: Most of the population moves to the Champdepraz sector. Again, distribution is confined to areas far from trails or where human traffic is very low.
- Summer: Although the distribution is more homogeneous across the valleys, the species moves to higher altitudes and no individuals have been reported near trails with high or very high traffic.

The data observed in 2021 show that the chamois tends to concentrate within the park territory in different seasons in areas where there is low human presence. The southern sectors of Champorcher (winter/autumn) and Champdepraz (spring) are confirmed as the species' preferred areas for most of the year.

YEAR 2022

| YEAR 2022 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 51 | 1450 m - 2500 m |
| Spring | 24 | 1400 m - 2500 m |
| Summer | 70 | 1650 m - 2800 m |
| Autumn | 87 | 1400 m - 2850 m |

Table A.4 Seasonal observations of chamois in 2022

The data analysed (Table A.4) show that the species occupies a wide altitude range, from 1,400 m to typical Alpine altitudes (2,850 m). An increase in the lower limit is observed in summer (1,650 m), probably linked to the search for fresh pastures and avoidance of high temperatures in lower altitude areas.

In line with observations made in 2024 and 2023, the spatial behaviour of the chamois seems to show a strategy of avoiding areas with medium-high traffic on the park's trail network. In winter, spring and autumn, the species is mainly concentrated in the Champorcher (trails 9a, 9c, 9d) and Champdepraz areas, where trail traffic data is very low or absent. During the summer, although the species is more evenly distributed in the central sector of the park at higher altitudes, there is a noticeable distance from the most frequented trails, to the extent that no individuals have been reported in areas with high or very high traffic. The areas south of the park's boundaries and those far from the trail network are the most occupied sectors.

The data analysed on the presence of chamois within the park describe the seasonal movements of the species, which tends to avoid areas with high human presence. The Champorcher sector (southern area) is a zone that is very popular with the species, mainly in winter and autumn, when low attendance data are recorded.

YEAR 2023

| YEAR 2023 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 38 | 1350 m - 2500 m |
| Spring | 52 | 1650 m - 2500 m |
| Summer | 43 | 1600 m - 2900 m |
| Autumn | 33 | 1650 m - 2650 m |

Table A.5 Seasonal observations of chamois in 2023

For the year 2023, the number of observations of the species remains fairly constant at fairly high numbers, with a slight peak recorded in spring (52 sightings; Table A.5). The data show some seasonal altitudinal variation in line with the behaviour of the species:

- The altitudinal range is more extensive in winter (1350 m - 2500 m), including lower altitudes due to harsher environmental conditions.
- The upper limit of maximum altitude (2900 m) is reached in summer, when the species can more easily access high-altitude pastures and adapt to seasonal temperature increases.
- The species is mainly concentrated between 1600 m and 2650 m in the intermediate seasons.

As in 2024, analysis of data observed in 2023 again shows a possible inverse correlation between the presence of the species and the intensity of human activity along the trails.

- The Champorcher (Trails 9a, 9b, 9c, 9d) and Champdepraz sectors represent the areas of greatest concentration of the species in winter, spring and autumn. These areas are consistently characterised by very low frequency data or a total absence of usage data.
- In summer, although distributed more evenly across the valleys, the species avoids the most frequented trails by climbing to higher altitudes, which is why no individuals have been reported near trails with high or very high traffic. The presence data identify the species as being present exclusively in areas with very low traffic or without data.

This year's analysis also identifies occurrences where greater tolerance to human presence may emerge:

- Winter: Several individuals were observed just outside the park boundaries (south of Champorcher) near trails with medium traffic.
- Spring: individuals were observed near trail 10 in Champorcher, which has very high traffic data.

The distribution of observations for 2023 shows that the species tends to frequent areas of the park with low disturbance, avoiding trails with high or very high traffic.

YEAR 2024

| YEAR 2024 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 25 | 1800 m - 2900 m |
| Spring | 22 | 1540 m - 2500 m |
| Summer | 36 | 1400 m - 2700 m |
| Autumn | 31 | 1650 m - 2550 m |

Table A.6 Seasonal observations of chamois in 2024

The analysis highlights how the species tends to occupy higher altitudes in winter (up to 2,900 m) and then descends significantly in spring, gradually climbing again during summer and autumn (Table A.6).

Analysis of data observed in 2024 shows a possible inverse correlation between the presence of the species and human use of the park's trail network, as evidenced by:

Areas of greatest presence:

- Champorcher sector (Trails 9a, 9b, 9c, 9d): This is the area most frequented by the species in winter, spring and autumn. This area is characterised by very low frequency data.
- Champdepraz and Fenis sector: The presence increases in spring but remains confined to areas with low or no trail use (e.g. trails 6b, 7b).

Areas apparently excluded from the species:

- Trail 10 / 10c: Despite its proximity to areas populated by the species, the high frequency recorded (especially in spring) coincides with the absence of sightings.
- People counters (Serva, Cort, Miserin): along the trails where people counters have been installed, no individuals were observed in summer, when footfall is very high.

For the year 2024, the chamois seems to show a marked preference for the less frequented areas of the Park. There is a tendency for the species to avoid trails with 'Medium', 'High' or 'Very High' traffic. The only isolated case that bucks this trend is the presence of individuals in the summer season near trail 5-5c, which has average visitor numbers. In summer, the species tends to move towards the central area of the park, climbing to higher altitudes, and the data suggest that the lower limit of the altitude range (1400 m) is lowered, while maintaining distance from the busiest trails.

Alpine ibex Capra ibex

YEAR 2019

| YEAR 2019 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 0 | - |
| Spring | 4 | 2350 m - 2700 m |
| Summer | 18 | 2600 m - 3050 m |
| Autumn | 1 | 2700 m |

Table A.7 Seasonal observations of Alpine ibex in 2019

For 2019, observations of the species show an increasing altitudinal dynamic as the warm season progresses, reaching 3050 m in summer and settling at an altitude of 2700 m for autumn in relation to the only seasonal report (Table A.7). There are no observations for the winter season.

As in all other years covered by this analysis, the 2019 data also seem to show that the spatial distribution of the ibex tends to avoid areas of the Park characterised by greater anthropogenic pressure. Once again this year, the Champorcher sector is confirmed as the area with the highest number of sightings of the species in all seasons of observation. Individuals systematically occupy areas far from the busiest trail network. Sightings occur almost exclusively in areas where trail usage data is very low or completely absent. In summer, the data shows that the species moves to higher altitudes and individuals have been spotted far from the trail network or near trails with low human traffic.

Annual distribution data highlight the species' tendency to confirm its link with high-altitude alpine grasslands and rocky environments, with a seasonal range that stabilises above 2300 m. Observations by the park surveillance team regarding the use of the trail network by visitors to the protected area show that the species tends to be encountered in areas with extremely low human traffic. The total absence of observations near trails with high or medium traffic could indicate that areas with greater human pressure are avoided.

YEAR 2020

It should be noted that the significance of the observations reported is strongly influenced by the dynamics of the Covid-SARS pandemic, which has affected both human pressure on the trails and the methods of data collection.

| YEAR 2020 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 1 | 2000 m |
| Spring | 6 | 2000 m - 2700 m |
| Summer | 11 | 2600 m - 3100 m |
| Autumn | 2 | 2450 m - 2700 m |

Table A.8 Seasonal observations of Alpine ibex in 2020

The altitude trend shows a steady rise from 2,000 m in spring to over 3,100 m in summer, followed by a partial descent in autumn (Table A.8). The maximum number of individuals (11) coincides with the opening of the high-altitude grasslands.

The spatial distribution of *Capra ibex* highlights a habitat selection strategy based on isolation and avoidance of areas with greater human impact.

- Elective sector: The south-western sector of Champorcher is confirmed as the vital area for the species in all the seasons monitored.
- Behaviour with regard to the trail network: In spring and autumn, almost all individuals were located far from the trails or in segments of the network with no data on frequentation.
- During the summer, despite an increase in observations, the animals maintain a safe distance from the main trail network, taking refuge in the most remote and rugged areas of the Park.
- The very rare exceptions of proximity to trails (e.g. Champdepraz sector in summer) occur exclusively where traffic is classified as 'Very Low'.

Analysis of the 2020 data for the ibex (*Capra ibex*) seems to highlight:

1. Loyalty to the South-West Sector: The Champorcher Valley (south-west sector) is the only real "safe haven" for the species, hosting the population throughout the year.
2. Sensitivity to disturbance: The species shows an extremely low anthropic tolerance index. Its distribution is inversely proportional to human traffic: the greater the potential disturbance on the trails, the higher the altitude reached by individuals or their distance from the network.
3. Autumn anomaly: The autumn data and the total absence in the central sector of Champorcher during this period suggest a dispersion towards even more remote areas or outside the park boundaries, probably in preparation for the winter season.

YEAR 2021

The significance of the observations reported in this analysis is strongly influenced by the Covid-SARS pandemic, which affected both the use of trails and the continuity of monitoring activities by the surveillance corps.

| YEAR 2021 | | |
|------------------|-------------------------|-----------------------|
| Season | No. Observations | Altitude range |
| Winter | 1 | 2470 m |
| Spring | 5 | 2150 m - 2650 m |
| Summer | 13 | 2700 m - 3050 m |
| Autumn | 3 | 1850 m - 2800 m |

Table A.9 Seasonal observations of Alpine ibex in 2021

In 2021, there was an increase in sightings in summer (13), which represents the annual peak. Winter recorded the lowest figure (Table A.9). Spring (5) and autumn (3) showed intermediate values.

As in other years of study, the 2021 data show that the distribution of the species in the park could indicate an inverse correlation with the use of the trail network, with a marked preference for quieter areas. In most seasons, individuals are located far from the trail network or in areas where no frequentation data are recorded. In summer, the species climbs to higher altitudes (up to 3050 m) and to areas far from the main tourist flows. The south- western sector of Champorcher remains the area where the species is most present, accounting for almost all sightings during the year.

Analysis of the data for the ibex in 2021 indicates the species' extreme sensitivity to human disturbance. The species prefers the south-western sector of Champorcher and high mountain areas not affected by the most frequented trail network. Altitude remains one of the limiting factors of disturbance, especially in summer, when the species reaches the upper limits of the park's territory.

YEAR 2022

| YEAR 2022 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 6 | 1250 m - 2600 m |
| Spring | 1 | 2750 m |
| Summer | 28 | 2100 m - 2900 m |
| Autumn | 11 | 1800 m - 2800 m |

Table A.10 Seasonal observations of Alpine ibex in 2022

Data for 2022 (Table A.10) also confirm that the species is linked to high-altitude environments, especially in the warm seasons, where the lower limit does not fall below 1,800-2,100 m. Winter data, on the other hand, show a wide altitudinal range, with individuals reported up to 1,250 m in the Champdepraz sector.

The distribution of the species within the Park shows that the ibex seems to be conditioned by the search for areas with low anthropogenic impact. In all seasons, almost all individuals were observed at a distance from the trail network or near sections characterised by very low traffic or with no data. The south-western and south-eastern sectors of Champorcher represent the area with the highest presence of the species, hosting most of the observations in winter, summer and autumn.

- Winter: Individuals are divided between the high altitudes of Champorcher (2100- 2600 m) and the lower altitudes of Champdepraz.
- Summer: The highest number of sightings (28) is recorded. The species is concentrated in the most remote areas of Champorcher, Fénis and Champdepraz, strictly avoiding the most popular trails.
- Autumn: Individuals remain at high altitudes (up to 2800 m), concentrating once again in the south-western sector of Champorcher in areas where there are no records of human presence.

Analysis of the 2022 data for the ibex shows a possible trend of systematic avoidance of areas of the park characterised by greater human frequentation. The species shows a tendency to frequent the most isolated areas of the park, particularly the southern areas of Champorcher, where anthropogenic pressure is minimal or non-existent. The total absence of sightings at the nodes monitored by people counters or data from park ranger observations, especially during peak summer visitor numbers, could confirm that human disturbance is a limiting factor for the species' use of the habitat, pushing it towards areas with less impact.

YEAR 2023

| YEAR 2023 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 4 | 1250 m - 2600 m |
| Spring | 7 | 2200 m - 2550 m |
| Summer | 13 | 2100 m - 2800 m |
| Autumn | 10 | 1800 m - 2800 m |

Table A.11 Seasonal observations of Alpine ibex in 2023

Quantitative analysis (Table A.11) shows that the peak number of observations occurs in summer (13 sightings), while the number is lower in winter (4) and spring (7), and remains high in autumn (10). The altitude *range* is wide in winter (1250 m – 2600 m, due to a single individual at low altitude) and stabilises at high altitudes (above 2100 m) in spring and summer, reaching its maximum (2800 m) in summer and autumn.

The 2023 data indicate the species' probable tendency to avoid areas with high human traffic, with a preference for high-altitude habitats and more isolated areas, in line with the findings of this study for the chamois (*Rupicapra rupicapra*). In all seasons, most individuals were observed far from the trail network or near trails with very low use or no data.

- Spring: All individuals are found in the Champorcher Sud sector, mainly far from the network, with one exception near trail 9c, which, however, has very low usage.
- Summer: Distribution remains confined to low-disturbance areas in the south-west Champorcher, Fénis and Champdepraz areas, all far from the trail network or near trails with no usage data.
- In winter, one observation was made near a trail with medium use in Champorcher, together with one observation at low altitude in the Champdepraz forest at 1250 m.

The south-western/south-eastern Champorcher area is identified as the area with the highest presence of the species in all seasons.

YEAR 2024

| YEAR 2024 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 0 | - |
| Spring | 5 | 2200 m - 2550 m |
| Summer | 15 | 2100 m - 2800 m |
| Autumn | 2 | 1800 m - 2800 m |

Table A.12 Seasonal observations of Alpine ibex in 2024

Quantitative analysis (Table A.12) shows that the peak number of sightings occurs in summer (15 sightings), while the number is low in spring (5) and drops further in autumn (2). The ibex maintains high altitudes, with the *range* expanding in summer (2100 m – 2800 m) and autumn (1800 m – 2800 m), but with fewer observations in the latter season.

In relation to the behaviour of the species, the data show a tendency to avoid areas of the Park where human traffic increases in all monitored seasons, preferring environments with less disturbance. In spring, all individuals were observed far from the trail network and near trail 9c in Champorcher, which is nevertheless very little used. Summer observations confirm that distribution remains confined to areas with low disturbance:

- Most individuals were observed in the south-western Champorcher sector, far from the trail network or near trails with very low use or no data.
- The same situation was found for the four reports in the Fenis sector, where individuals were far from trails or near trails with very low usage.

In autumn, although there were only two observations, individuals were reported in areas for which there are no data on visitor numbers (trails 6c in Champdepraz and 8b in Champorcher), confirming the trend described above. The analysis does not record any reports near trails classified as medium, high or very high traffic in any of the seasons.

For the year 2024, it appears that the distribution of the species is limited almost exclusively to areas with no or very low trail use. Although the highest number of observations occur in summer (15), the use of the territory during this period is limited to the most isolated areas (Champorcher South-East and Fenis), keeping away from the main tourist flows. The high- altitude sectors and areas with unmarked trails or very low traffic in Champorcher and Fenis are essential as refuge and feeding habitats for the ibex.

Black grouse (Lyrurus tetris)

YEAR 2019

| YEAR 2019 | | |
|------------------|-------------------------|-----------------------|
| Season | No. Observations | Altitude range |
| Winter | 4 | 1850 m - 2100 m |
| Spring | 43 | 1650 m - 2200 m |
| Summer | 6 | 1250 m - 2150 m |
| Autumn | 3 | 1900 m |

Table A.13 Seasonal observations of Black grouse in 2019

For 2019, as in previous years, observation data show a fairly uniform altitude range for the species across the seasons, with a minimum always in the summer season with observations at lower altitudes (1250 m; Table A.13).

Spatial distribution is always linked to observations indicating occupation of the territory based on the presence of the species in areas with rich forest cover. This year, the Champdepraz sector in the north-east and east is again confirmed as the area with the highest number of reports for the species. There is a preference for densely wooded areas, which are located near trails with very low traffic or where there is no data on usage. In the Champorcher sector, sightings are limited to the southern and south-eastern areas of the park, with individuals located far from the trail network. In summer, almost all sightings occur in the Champdepraz sector; the only sighting reported in Champorcher is still quite far from the trails.

YEAR 2020

It should be noted that the significance of the observations reported is strongly influenced by the dynamics of the Covid-SARS pandemic, which has affected both human pressure on the trails and the methods of data collection.

| YEAR 2020 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 10 | 1550 m - 2100 m |
| Spring | 43 | 1600 m - 2200 m |
| Summer | 6 | 1250 m - 2150 m |
| Autumn | 11 | 1900 m - 2200 m |

Table A.14 Seasonal observations of Black grouse in 2020

For 2020, data and observations show a fairly constant altitude range for the species in all seasons, between 1550 m and 2200 m (Table A.14). As for 2021, the species was observed at a minimum altitude of 1250 m.

As in previous years, the spatial distribution of observations of *Lyrurus tetrix* confirms that the species is linked to woodland habitats. The Champdepraz sector (north-east and east) is the most stable area for sightings of the species in all seasons. Observations are systematically concentrated in densely wooded areas and near paths with very low traffic or no data at all. In the Champorcher sector, the presence is more fragmented and limited to the southern and south-eastern borders. In winter and spring, individuals occupy areas far from the trail network. There are very rare cases of overlap with trails with high visitor flows: in spring, only one individual was near trail 10, which has average traffic, while in winter, two individuals were detected in areas with low traffic. During the summer, the species is no longer reported in the Champorcher sector, but only in the less frequented areas of Champdepraz.

The north-eastern sector of Champdepraz remains the main 'sanctuary' for the species, thanks to the combination of suitable habitat (dense forest) and isolation from human activity.

YEAR 2021

The significance of the observations reported in this analysis is strongly influenced by the Covid-SARS pandemic, which affected both the use of trails and the continuity of monitoring activities by the surveillance corps.

| YEAR 2021 | | |
|------------------|-------------------------|-----------------------|
| Season | No. Observations | Altitude range |
| Winter | 6 | 1600 m - 2200 m |
| Spring | 46 | 1600 m - 2200 m |
| Summer | 7 | 1250 m - 2150 m |
| Autumn | 3 | 1900 m - 2200 m |

Table A.15 Seasonal observations of Black grouse in 2021

For 2021, the data show that the upper limit of the species' range remains stable at between 2150 and 2200 m, while in summer the minimum observation altitude is 1250 m (Table A.15).

As in other years studied, the spatial distribution of the black grouse in 2021 is also closely linked to the presence of forests. In all seasons, most individuals are concentrated in the northern and eastern sectors of Champdepraz. These areas, richly wooded areas coincide with sections of the trail network that are characterised by very low traffic or lack of data. In winter, individuals are located in wooded areas in the north- eastern sectors of Champdepraz, far from the trail network or with no traffic data. In the Champorcher sector, some individuals are reported near low-traffic trails. In spring, the highest number of sightings coincide with the wooded areas of Champdepraz, where human presence data is always very low. In summer, sightings decline again and are almost all in the Champdepraz area. In autumn, the species is no longer observed in the Champorcher area, but only in the wooded areas of Champdepraz, although the number of sightings remains very low.

As already pointed out, the species shows absolute fidelity to densely wooded areas, especially in the Champdepraz valley. In summary, it should be noted that the species has been observed in areas with low human accessibility, probably reinforced by the particular situation of reduced visitor numbers during the pandemic.

YEAR 2022

| YEAR 2022 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 13 | 1650 m - 2100 m |
| Spring | 40 | 150 m - 2100 m |
| Summer | 21 | 1250 m - 2400 m |
| Autumn | 2 | 1350 m - 2250 m |

Table A.16 Seasonal observations of Black grouse in 2022

The 2022 data show that the species exhibits a certain altitudinal plasticity across the seasons, with an expansion of its range in summer between 1,250 m and 2,400 m, and greater stability in the intermediate seasons (Table A.16).

As in other years, observations in 2022 also seem to show that the spatial distribution of the species within the park reveals a strategy of territory occupation influenced by forest cover. Similarly, based on the distribution of the trail network in these habitats, it appears to be affected by relative hiking pressure.

- In all seasons, the species prefers the northern and eastern sectors of Champdepraz, which are characterised by rich forest cover.
- For the year 2022, most individuals were observed in areas with trails for which there is no data on visitor numbers or with very low visitor numbers.
- In winter, spring and autumn, there are rare cases of individuals being observed near trails with average visitor numbers.
- During the summer, the black grouse is not encountered in the Champorcher sector, and observations are concentrated in areas of Champdepraz where the trail network has low or very low traffic, indicating a potential avoidance of areas with high tourist flows.

Analysis of this year's data seems to show that the species tends to model its presence on the availability of suitable and preferred habitats such as wooded areas and has been mainly encountered in areas characterised by the absence of human disturbance. The north-eastern sectors of Champdepraz are confirmed as the areas with the highest number of sightings.

YEAR 2023

| YEAR 2023 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 30 | 1550 m - 2100 m |
| Spring | 31 | 1650 m - 2100 m |
| Summer | 28 | 1800 m - 2150 m |
| Autumn | 19 | 1650 m - 2250 m |

Table A.17 Seasonal observations of Black grouse in 2023

Quantitative analysis for 2023 shows that the number of observations is high and relatively stable in winter, spring and summer, with 30, 31 and 28 reports respectively (Table A.17). The number of sightings drops in autumn, with 19 observations. The species occupies an altitude range typical of alpine wooded areas. The species is distributed across Champorcher and Champdepraz in winter/spring, concentrated in Champorcher and Fénis in summer, and more widely distributed across the three valleys in autumn.

The 2023 observation data also indicate that the black grouse has a distribution that shows a dependence on the wooded areas of the Park. In all seasons with good observation data (winter, spring, summer), the species is strongly associated with wooded areas, mainly in the north-east of Champdepraz, south-east of Champorcher and north-west of Fénis.

- Winter: Although most individuals avoid the most popular trails (with no or low traffic), some observations refer to individuals seen near trails with average traffic in the Champorcher area.
- Spring: Similarly, again in the Champorcher area, observations of individuals refer to individuals near trails with very high traffic, while all others were in areas with very low traffic.
- Summer: Unlike other seasons, in the summer period, when people counters and traffic data often indicate very high use, there is no overlap of individuals observed with trails that have traffic data higher than very low or no data recorded. The peak of summer tourist disturbance could make it seem like a total avoidance of highly used environments.
- Autumn: Similar to spring, some individuals were again reported near trails with high visitation, again in the Champorcher area.

YEAR 2024

| YEAR 2024 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 11 | 1770 m - 2100 m |
| Spring | 27 | 1770 m - 2100 m |
| Summer | 8 | 1700 m - 2000 m |
| Autumn | 13 | 1800 m - 2350 m |

Table A.18 Seasonal observations of Black grouse in 2024

Quantitative analysis shows that the peak number of sightings occurs in spring with 27 sightings, probably coinciding with the breeding and singing season (Table A.18). The species occupies a relatively stable altitude range in the seasons, mainly between 1700 m and 2100 m.

The data analysed and observations for the year 2024 show that the environments most used by the species are linked to forest habitats, which only occasionally overlap with the trail network. It is therefore noted that the anthropogenic pressure linked to the use of the trails tends to generate less intense disturbance, characterised precisely by the fact that the areas where most observations are concentrated are crossed by few trails.

- Spring (maximum presence): The highest number of individuals (27) is recorded in the northern and eastern sectors of the park (Champdepraz and Champorcher). Most sightings occur in areas with no or very low use. One sighting was reported near a trail with average use in Champorcher and one individual was reported near trail 5c with low use in Champdepraz.
- Winter: Most sightings occur in areas with no or very low disturbance (Champdepraz, Champorcher South/South-East).
- Summer (minimum observations): The number of observations decreases to 8. Individuals are mainly concentrated in Champorcher in the eastern area and in the Fénis sector. Observations occur near trails with very low traffic and there is no overlap with trails with higher traffic when tourist disturbance peaks in summer. No individuals have been reported in the Champdepraz sector.
- Autumn: The individuals contacted account for 13 observations and are distributed more evenly across the three valleys, but their presence is limited to areas with very low traffic or far from the trail network.

Although it is the season with the fewest reports, summer is the most critical period in terms of disturbance and the number of people present on the Park's trail network. It has been noted that during this season, the species has never been sighted near the most popular trails. The constant use of the 1700 m - 2100 m range makes these habitats (especially the Champdepraz North/East and Champorcher South/East) the areas where the species has been most frequently reported.

Rock ptarmigan (*Lagopus muta*)

YEAR 2019

| YEAR 2019 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 0 | - |
| Spring | 3 | 2350 m - 2400 m |
| Summer | 3 | 2400 m - 2800 m |
| Autumn | 3 | 2250 m - 2600 m |

Table A.19 Seasonal observations of Rock ptarmigan in 2019

The number of observations remains the same (3 individuals per season) in the three seasons surveyed. In summer, the species reaches the highest altitudes (up to 2800 m), probably seeking cooler areas and high-altitude refuges (Table A.19). In autumn, there is a slight decrease in altitude (2250 m).

As in previous years, analysis of the data continues to suggest that the species tends not to use the most frequented areas of the main trail network.

- Spring: Sightings are located exclusively in the Champorcher sector, in areas far from the trails or where there is no/very low traffic.
- Summer: Distribution expands slightly to include the Champdepraz sector, but individuals remain strictly distant from the trail network under evaluation. In the Champorcher valley, their presence is concentrated in the south-western sector, confirming their preference for less frequented areas.
- Autumn: The species is entirely concentrated in the southern and south-western areas of Champorcher. During this period, individuals frequent areas adjacent to trails with no visitor data, suggesting that they seek out areas of absolute tranquillity.

YEAR 2020

It should be noted that the significance of the observations reported is strongly influenced by the dynamics of the Covid-SARS pandemic, which has affected both human pressure on the trails and the methods of data collection.

| YEAR 2020 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 0 | - |
| Spring | 1 | 2350 m |
| Summer | 5 | 1700 m - 3050 m |
| Autumn | 0 | - |

Table A.20 Seasonal observations of Roch ptarmigan in 2020

The recorded data show a wide altitudinal range: although most individuals were sighted at high altitudes (up to 3050 m), there was one isolated observation at 1700 m, an unusually low altitude for the season (Table A.20).

The distribution of individuals confirms the extremely shy nature of the species and its high sensitivity to human presence. In both seasons for which data are available, all individuals were observed in areas far from the main trail network or in areas where there is no or very little human traffic. Most of the summer contacts (south-western sector) and the only spring contact (Col du Lac Blanc) are concentrated in the Champorcher sector.

The year 2020 was also strongly affected by the pandemic, which caused a general reduction in the sampling effort by surveillance personnel, resulting in very low visitor numbers in contrast to the data collected by people counters, as indicated below.

While the surveillance corps' surveys indicate very low visitor numbers almost everywhere, the people counters show significant peaks in activity:

- Servaz: Records high temperatures in spring and "very high" temperatures in summer.
- Miserin: Records Very High data in summer.

The absence of observations of rock ptarmigan near the Servaz and Miserin people counters, especially during the summer peak (Very High), seems to confirm that the species perceives anthropogenic disturbance as a limiting factor and tends to modify and move its territories to quieter areas.

YEAR 2021

The significance of this year's analysis data is strongly influenced by the COVID-Sars pandemic period, which has altered tourist patterns and the efforts to **COVID-Sars pandemic**, which altered tourist patterns and the sampling efforts of, causing a significant discrepancy between the people counter data and the surveillance estimates. Quantitative analysis is limited due to the very low number of observations (7 in total), making it difficult to draw meaningful conclusions.

| YEAR 2021 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 1 | 2300 m |
| Spring | 2 | 2280 m - 2650 m |
| Summer | 4 | 1700 m - 3050 m |
| Autumn | 0 | - |

Table A.21 Seasonal observations of Roch ptarmigan in 2021

For 2021, the rock ptarmigan appears to be a high-altitude species, with an altitude range between 2,280 m and 3,050 m (Table A.21). There is an anomaly in summer, with one observation at 1,700m.

Analysis of the data seems to confirm that the species is present in the park area where there is no or minimal human activity along the trail network:

- In spring and summer, all individuals were observed far from the trail network or near trails with very low traffic. This is consistent with the shy behaviour and high sensitivity of the species.
- The few spring observations are divided between Champorcher and Champdepraz (both far from the trail network).
- In summer, the species is concentrated in Champorcher and, despite showing an extreme altitudinal range (1700 m – 3050 m), seems to avoid frequented areas: all individuals are in areas with very low traffic.
- Although the year was characterised by a generally "very low" level of visitor numbers, the only trail to show high visitor numbers in summer was trail 10 in Champorcher, where no observations of the species were recorded in the vicinity, continuing to suggest its intolerance to high levels of disturbance.

The cross-analysis of the data is affected by the anomalies recorded: the pandemic year caused a general reduction in the sampling effort by surveillance personnel, resulting in generally very low visitation rates, which, however, contrast with the often very high visitation data recorded by people counters (especially in summer and spring).

Despite the discrepancy, the absence of observations of the species in the vicinity of any point where people counters were installed (Serva, Cort, Miserin) in all seasons seems to indicate that the species tends to avoid places with greater disturbance, regardless of the specific measurement data. This avoidance appears to be total even in the seasons (spring and summer) when people counters record peaks in visitor numbers, suggesting that the species does not tolerate high visitor flows.

YEAR 2022

| YEAR 2022 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 0 | - |
| Spring | 8 | 2300 m - 2700 m |
| Summer | 7 | 2400 m - 2850 m |
| Autumn | 2 | 2300 m - 2650 m |

Table A.22 Seasonal observations of Roch ptarmigan in 2022

Quantitative analysis for 2022 shows that the highest number of observations occurred in spring (8 sightings), followed by summer (7), with a significant decline in autumn (2), with sightings consistently above 2300 metres (Table A.22). The maximum altitude (2850 m) is reached in summer, in line with the trend for other observation periods.

Similar to 2024 and 2023, the distribution of observations is strongly correlated with the absence or minimal intensity of human activity. In all seasons in which observations were made (spring, summer, autumn), all individuals were observed in areas far from the trail network or near trails with no or very low traffic data. This behaviour is consistent with the shy nature and high sensitivity of the species to disturbance.

- Spring: Distribution is homogeneous in the three valleys, concentrated in areas with low disturbance habitats.
- Summer: Individuals are found in the southern and south-eastern sectors of the park, mainly in Champorcher. Distribution remains limited to trails with no or very low use.
- Autumn: With a minimum number of observations (2), individuals have been reported in areas with no attendance data (north-west Fenis and south-west Champorcher).

YEAR 2023

| YEAR 2023 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 3 | 2450 m - 2600 m |
| Spring | 0 | - |
| Summer | 7 | 2400 m - 2850 m |
| Autumn | 2 | 2300 m - 2650 m |

Table A.23 Seasonal observations of Roch ptarmigan in 2023

Quantitative analysis (Table A.23) shows that the highest number of observations occurred in summer (7 sightings), followed by winter (3) and autumn (2). The rock ptarmigan is a high-altitude species, with sightings consistently above 2300 metres, reaching a maximum altitude (2850 m) in summer.

The location of rock ptarmigan individuals shows a strong tendency to avoid areas of high human use, with some significant summer exceptions.

- Winter: The three individuals were observed in areas far from the trail network or near trails with no or very low use.
- Autumn: The two individuals were observed in the north-western sector (Fénis), confirming their distance from the trail network or proximity to trails with no or very low usage.
- Summer: the species moves to the western sectors of the park, particularly to Champorcher. Although the general trend remains towards areas with no or very low disturbance, there are two exceptions compared to previous seasons:
 - One individual was reported near trail 7, which has low traffic.
 - An individual was reported in the vicinity of the Miserin people counter, an area that is very popular in summer (see detailed map), in contrast to the very low figure reported by the surveillance corps.

The data recorded in 2023 also confirm that the partridge is a species that tends to avoid areas with high human disturbance. The constant location of individuals (except for isolated summer sightings) in areas with no or very low visitor numbers shows that human pressure is an important factor to consider in the species' use of the habitat. Summer sees the highest number of sightings, but also the only two exceptions to the species' tendency to avoid the most frequented areas.

YEAR 2024

| YEAR 2024 | | |
|-----------|------------------|-----------------|
| Season | No. Observations | Altitude range |
| Winter | 0 | - |
| Spring | 9 | 2290 m - 2700 m |
| Summer | 4 | 2500 m - 2800 m |
| Autumn | 5 | 2500 m - 2900 m |

Table A.24 Seasonal observations of Roch ptarmigan in 2024

Altimetric analysis shows that the rock ptarmigan is a high-altitude species, with sightings consistently above 2290 metres, reaching its maximum altitude (2900 m) in autumn (Table A.24). The decrease in the number of observations in summer is particularly notable, suggesting a possible dispersion into less monitored and/or monitorable areas.

In all seasons in which observations were made, the distribution of the species is closely related to the absence or minimal intensity of human activity. All individuals were observed in areas far from the trail network or near trails with no or very low traffic. This behaviour is consistent with the shy nature and sensitivity of the species to disturbance.

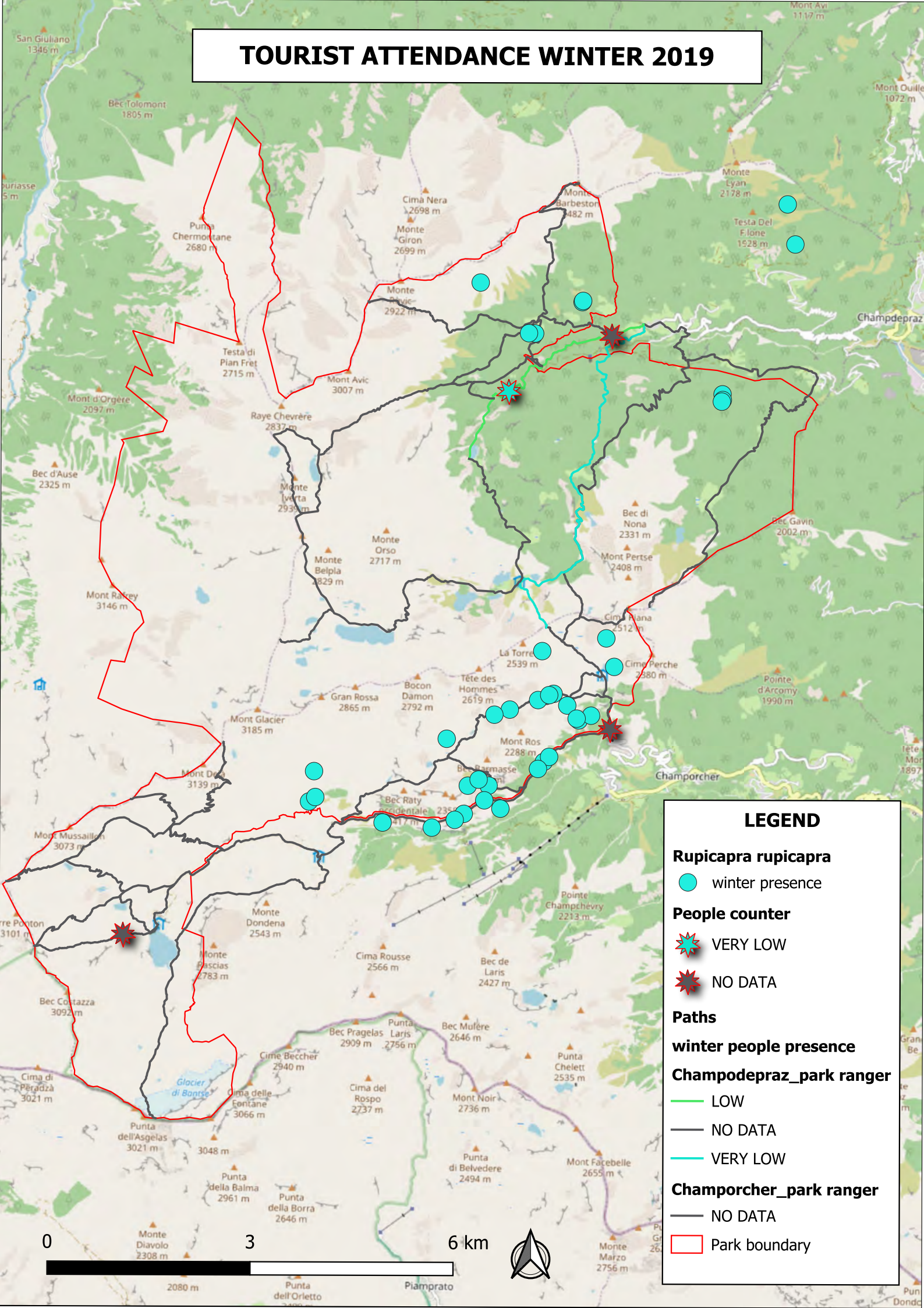
The species shows significant mobility, moving from its spring areas to the west in summer and then to the south-west in autumn, always seeking habitats with very low disturbance.

Analysis of presence data confirms that the rock ptarmigan is a species sensitive to anthropogenic disturbance, whose distribution within the Park appears to be inversely proportional to the rate of human pressure on the trail network. The species usually frequents high-altitude areas (above 2300 m), but even within this altitude range, there is a tendency to avoid areas near trails when these have above-average traffic.

Annex 2 – Study Case PNMA

Disturbance from Tourists: Chamois

TOURIST ATTENDANCE WINTER 2019



LEGEND

Rupicapra rupicapra

● winter presence

People counter

★ VERY LOW

★ NO DATA

Paths

winter people presence

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

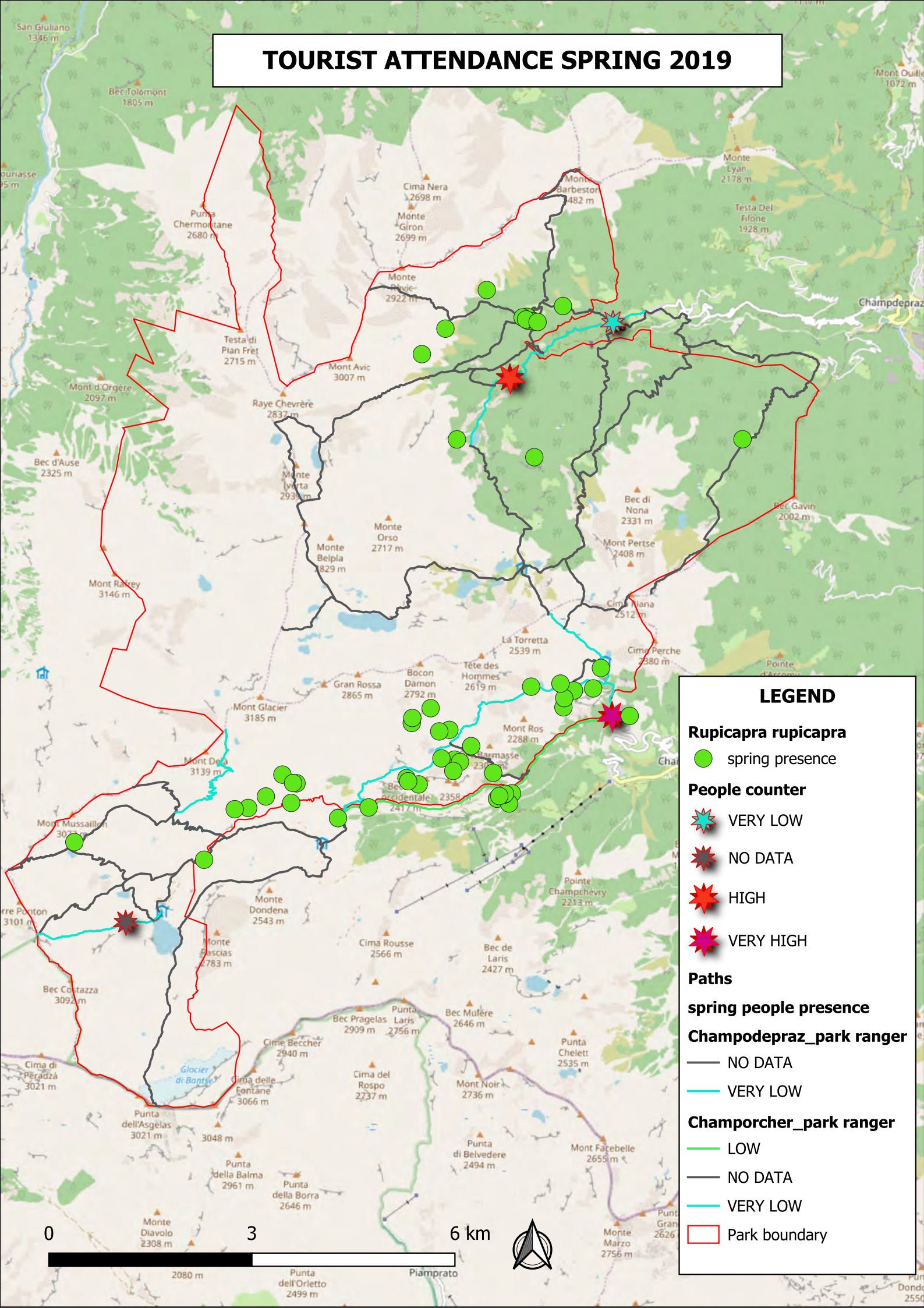
— NO DATA

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE SPRING 2019



LEGEND

Rupicapra rupicapra

● spring presence

People counter

★ VERY LOW

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

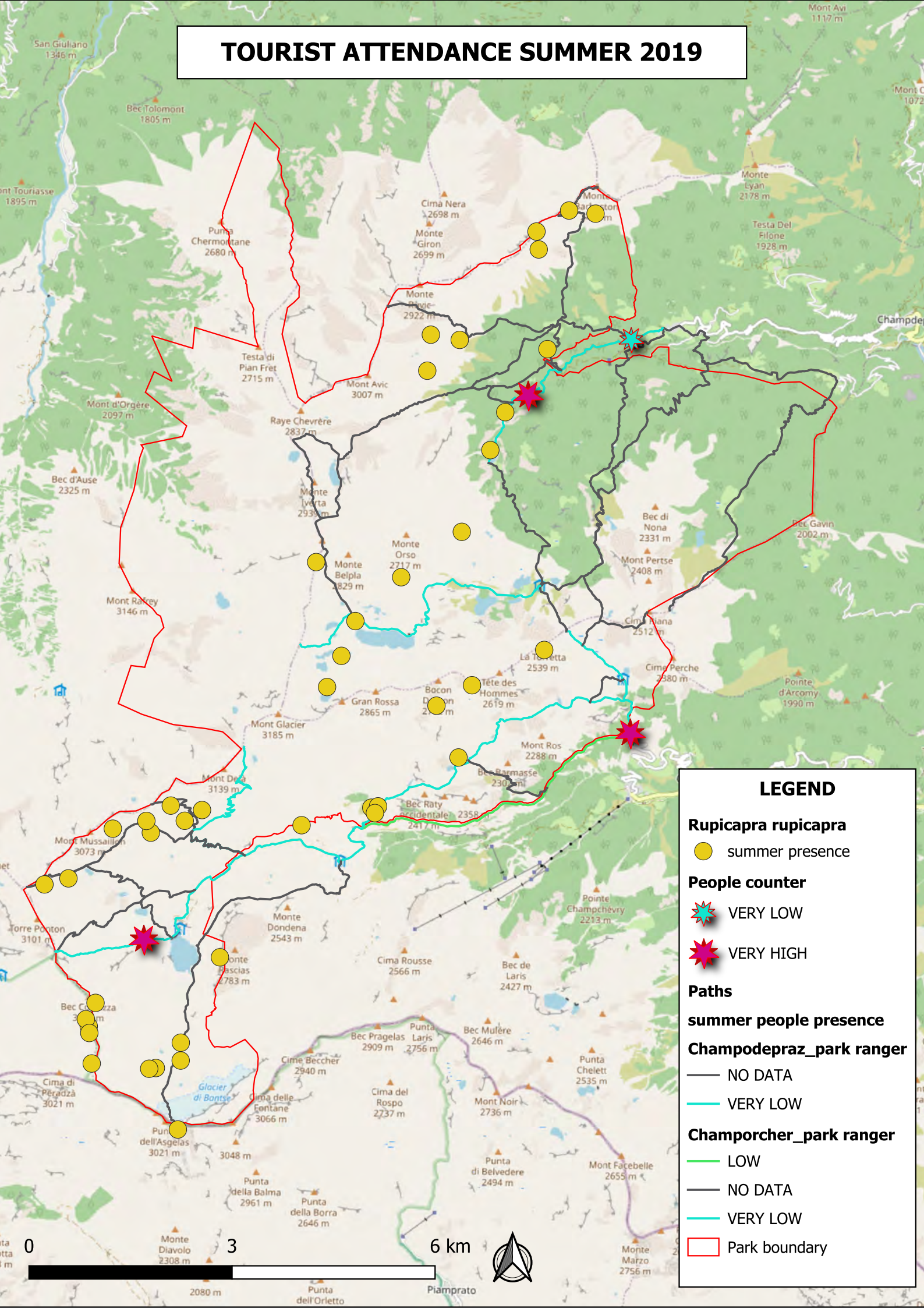
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2019



LEGEND

Rupicapra rupicapra
 summer presence

People counter

 VERY LOW

 VERY HIGH

Paths

summer people presence

Champodepraz_park ranger

— NO DATA


— VERY LOW

Champorcher_park ranger

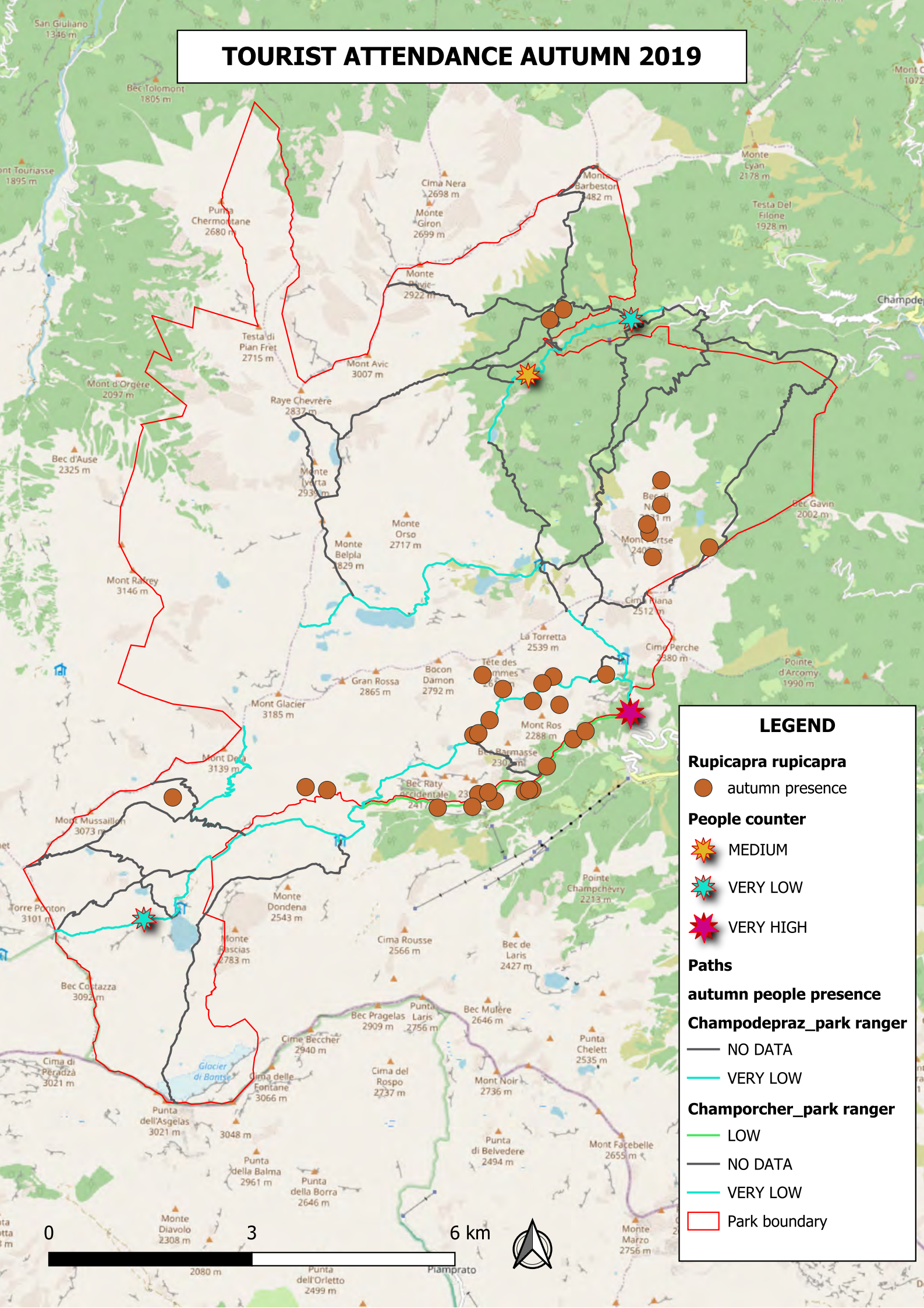
— LOW

— NO DATA

— VERY LOW

 Park boundary

TOURIST ATTENDANCE AUTUMN 2019



LEGEND

Rupicapra rupicapra

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ VERY HIGH

Paths

autumn people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

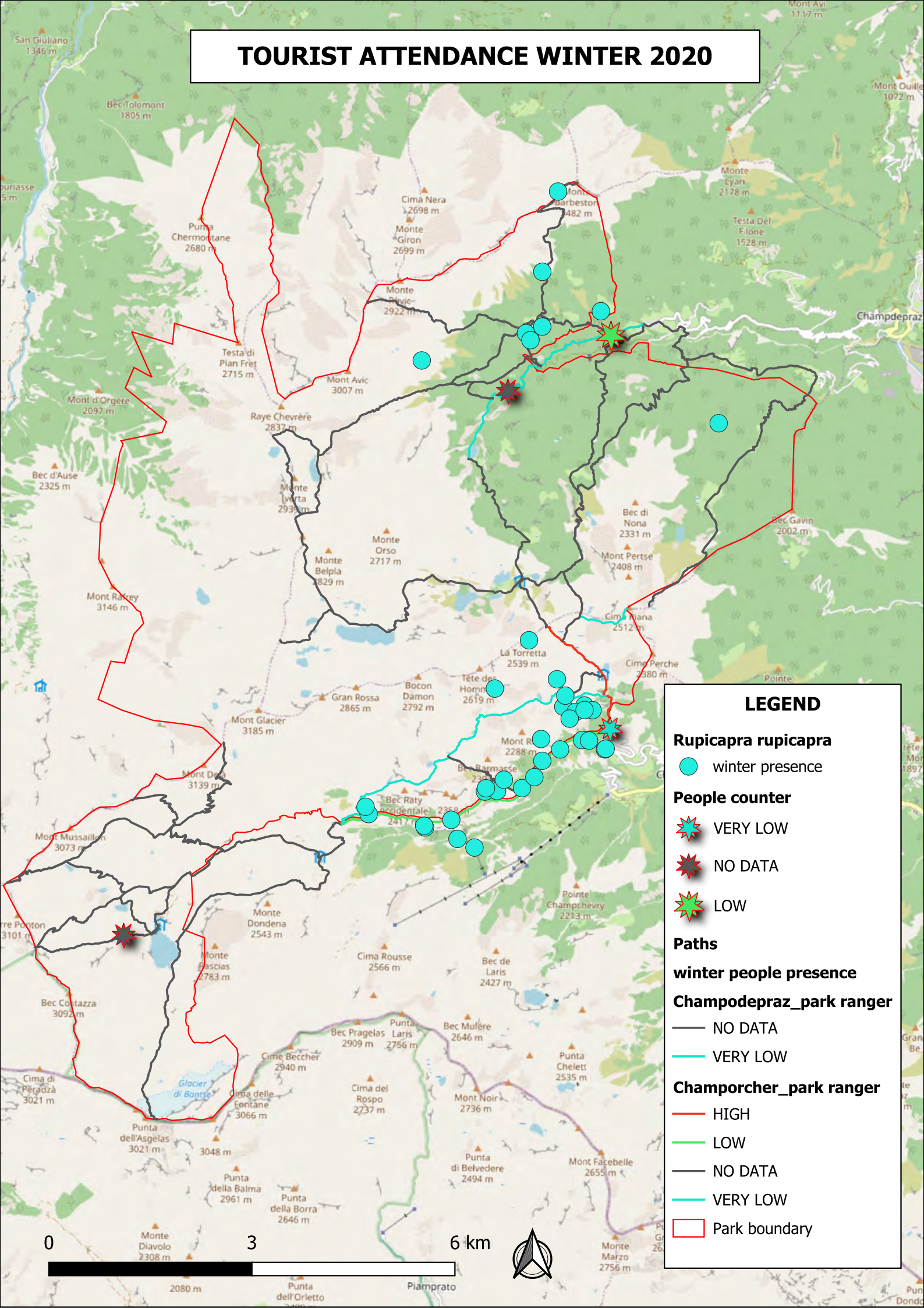
— LOW

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE WINTER 2020



LEGEND

Rupicapra rupicapra

● winter presence

People counter

★ VERY LOW

★ NO DATA

★ LOW

Paths

winter people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

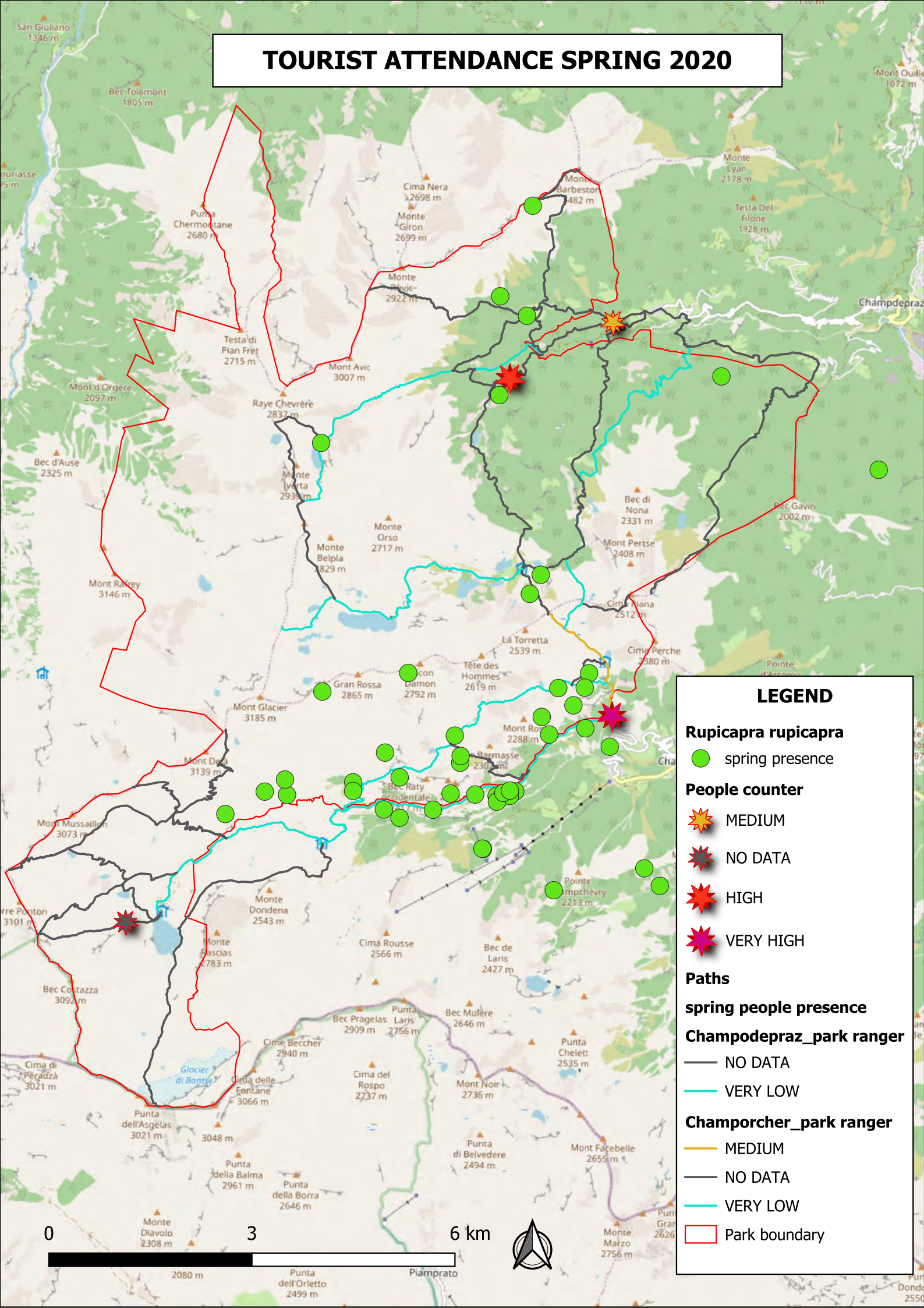
— LOW

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE SPRING 2020



LEGEND

Rupicapra rupicapra

● spring presence

People counter

★ MEDIUM

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

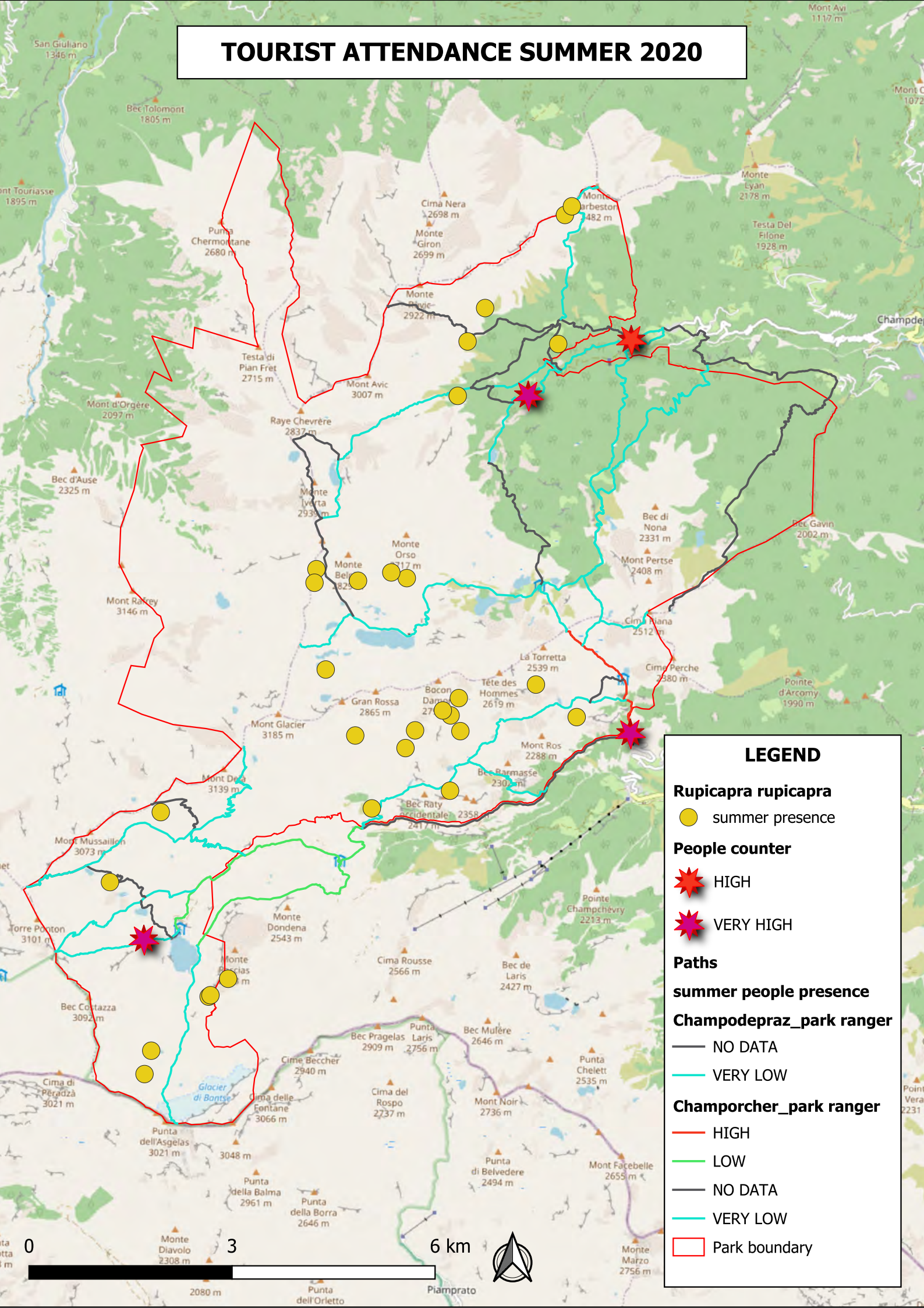
— MEDIUM

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE SUMMER 2020



LEGEND

Rupicapra rupicapra

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

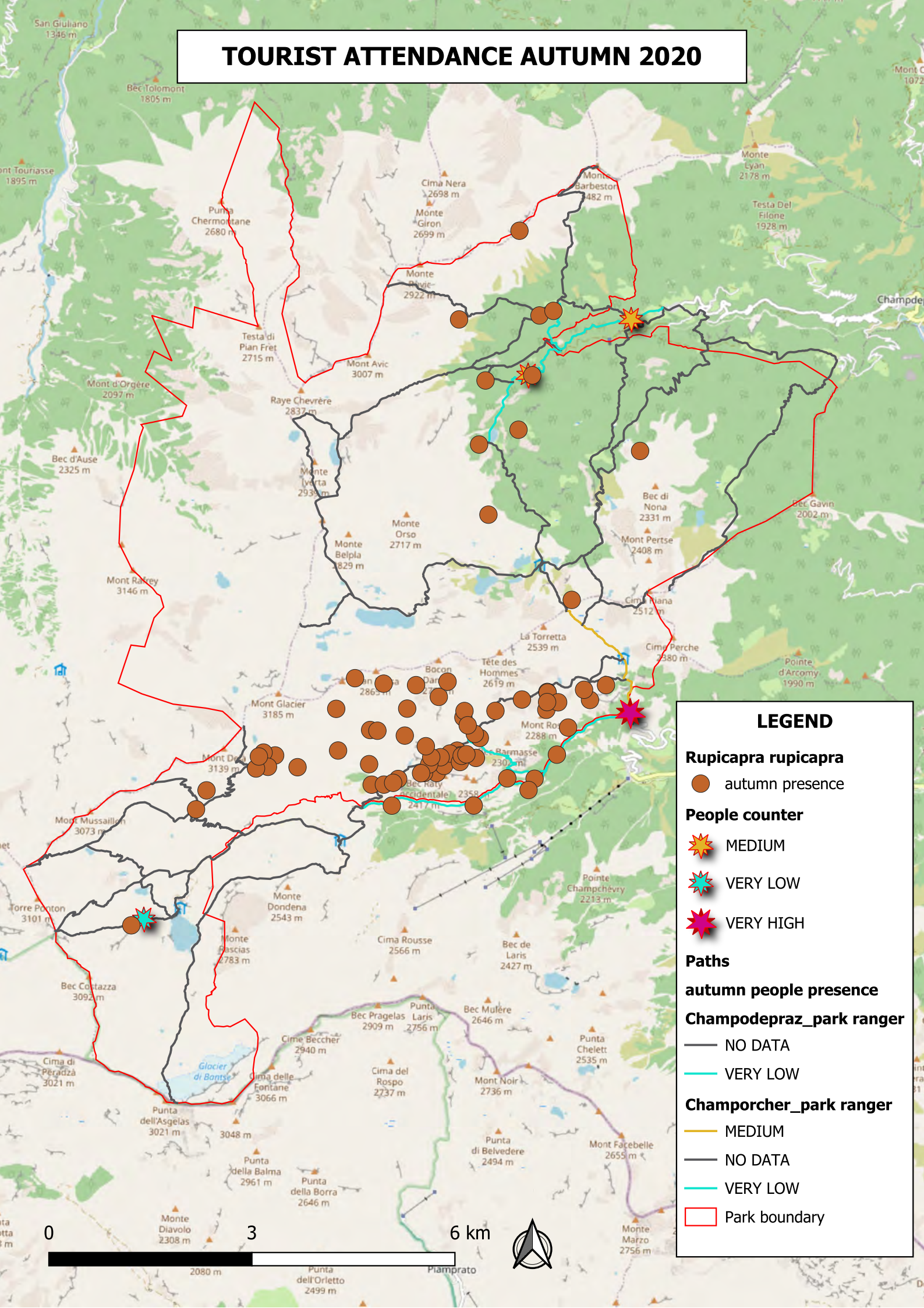
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE AUTUMN 2020



LEGEND

Rupicapra rupicapra

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ VERY HIGH

Paths

autumn people presence

Champodepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

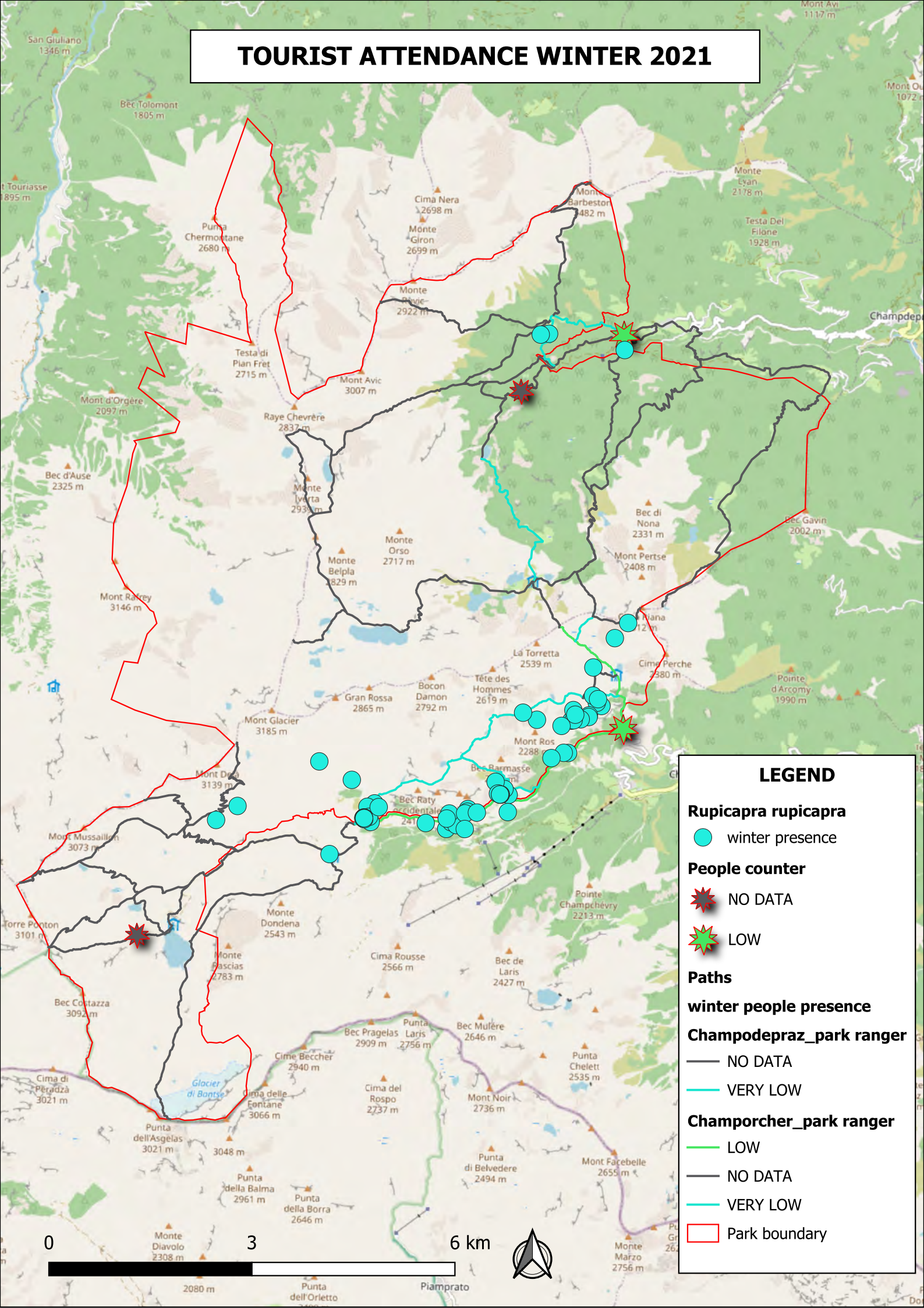
— MEDIUM

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE WINTER 2021



LEGEND

Rupicapra rupicapra

● winter presence

People counter

★ NO DATA

★ LOW

Paths

winter people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

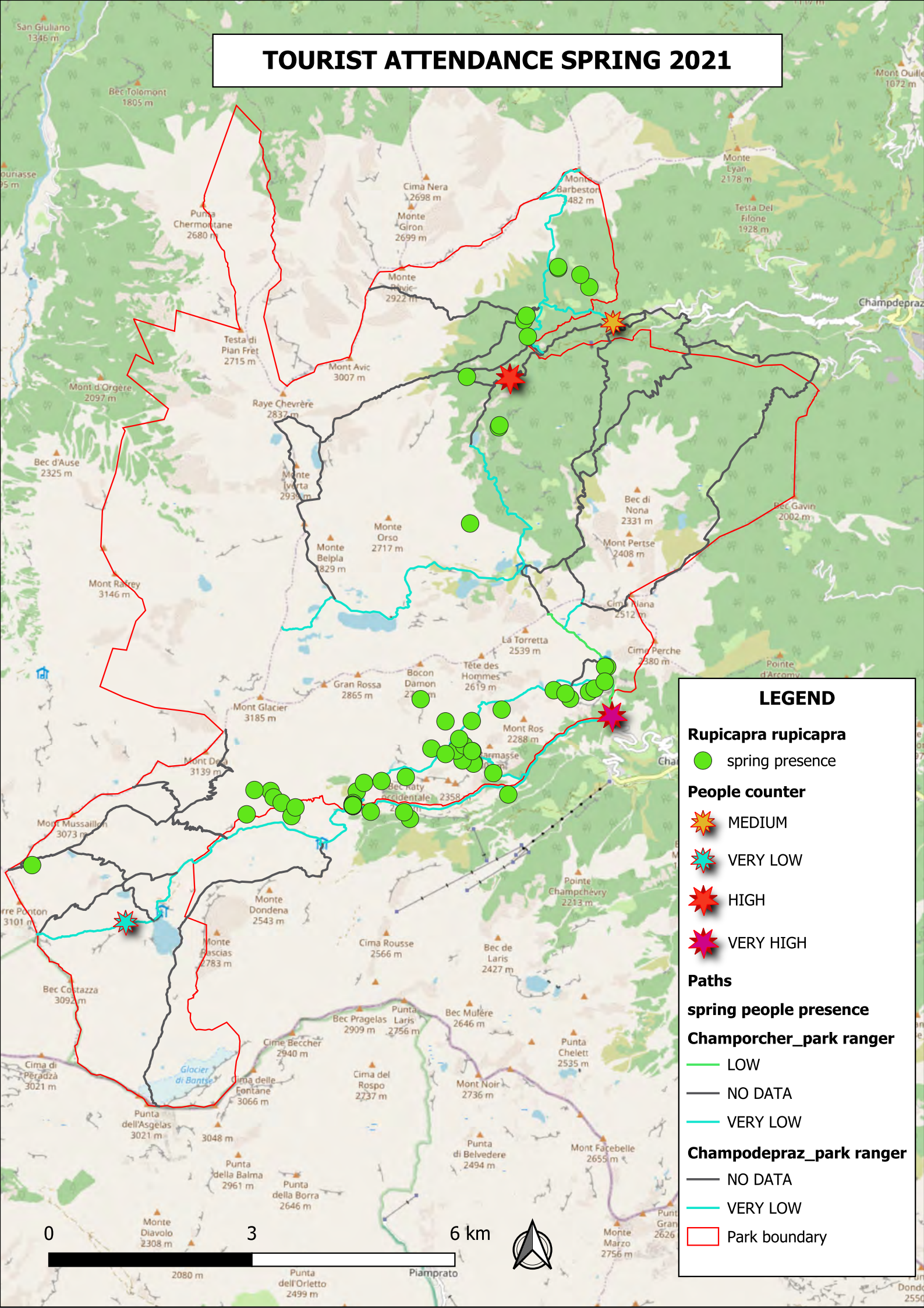
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE SPRING 2021



LEGEND

Rupicapra rupicapra

● spring presence

People counter

★ MEDIUM

★ VERY LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

Champodepraz_park ranger

— NO DATA

— VERY LOW

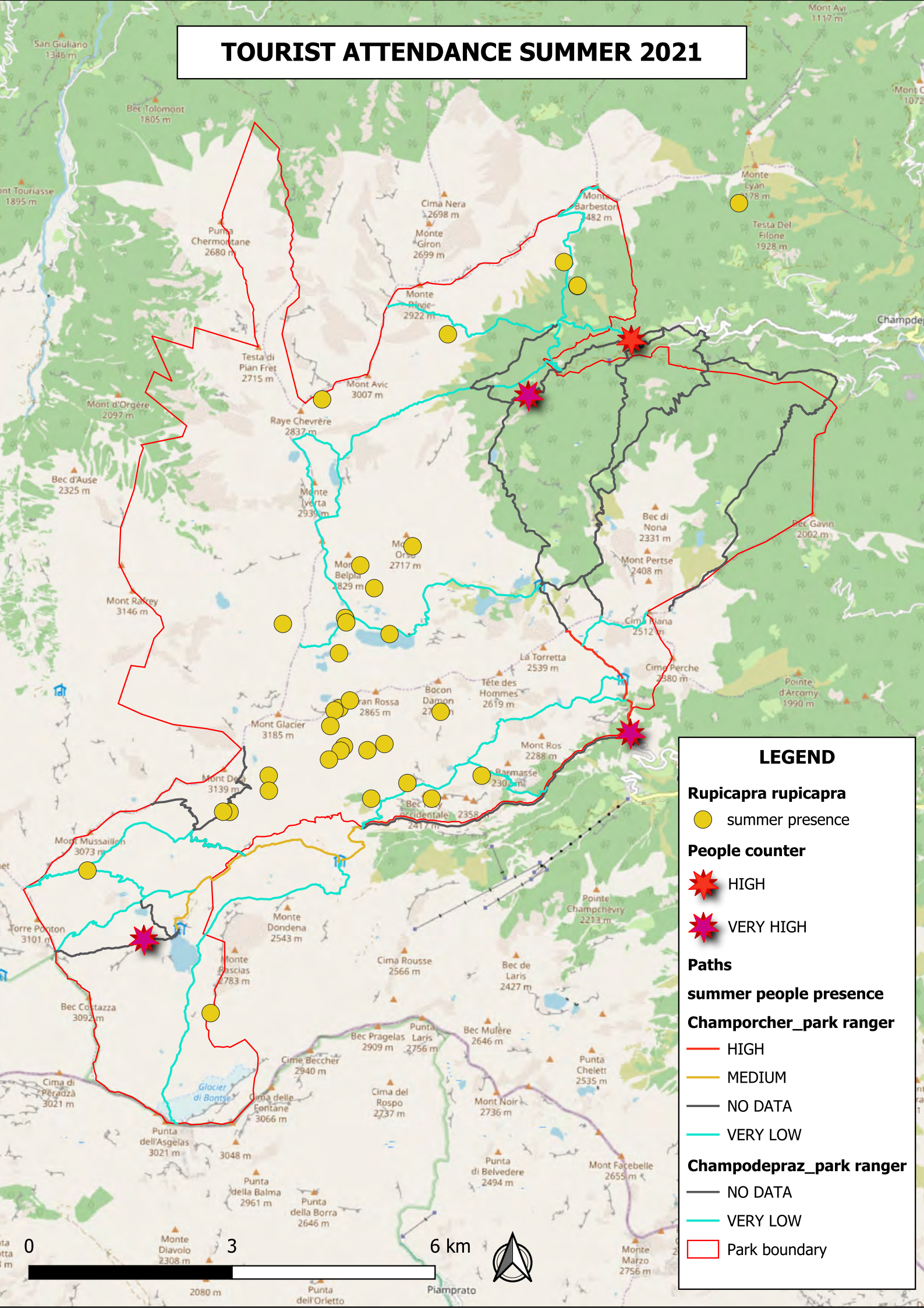
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2021



LEGEND

Rupicapra rupicapra

- summer presence

People counter

- ★ HIGH
- ★ VERY HIGH

Paths

summer people presence

Champorcher_park ranger

- HIGH
- MEDIUM
- NO DATA
- VERY LOW

Champodepraz_park ranger

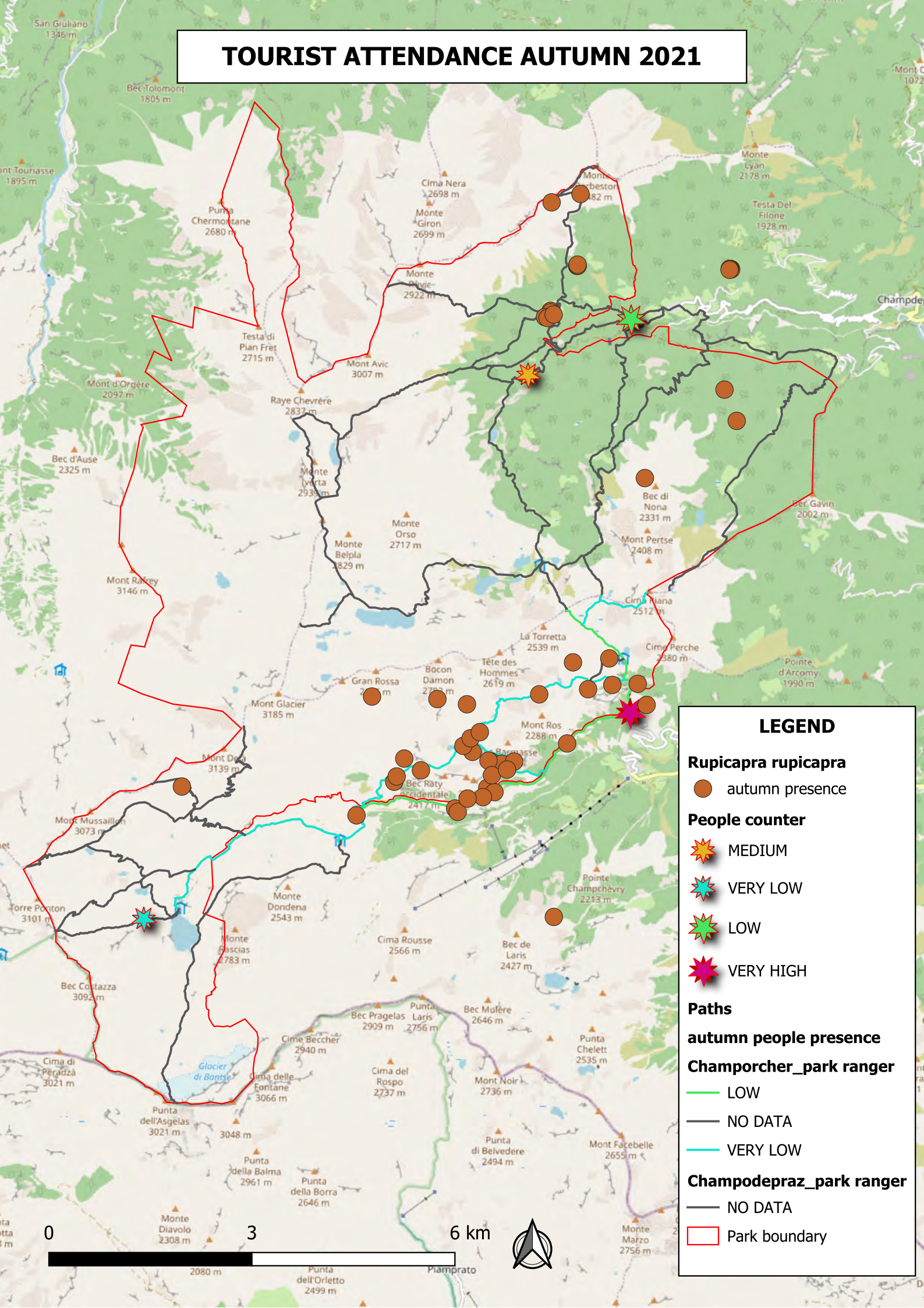
- NO DATA
- VERY LOW
- Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE AUTUMN 2021



LEGEND

Rupicapra rupicapra

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

Champodepraz_park ranger

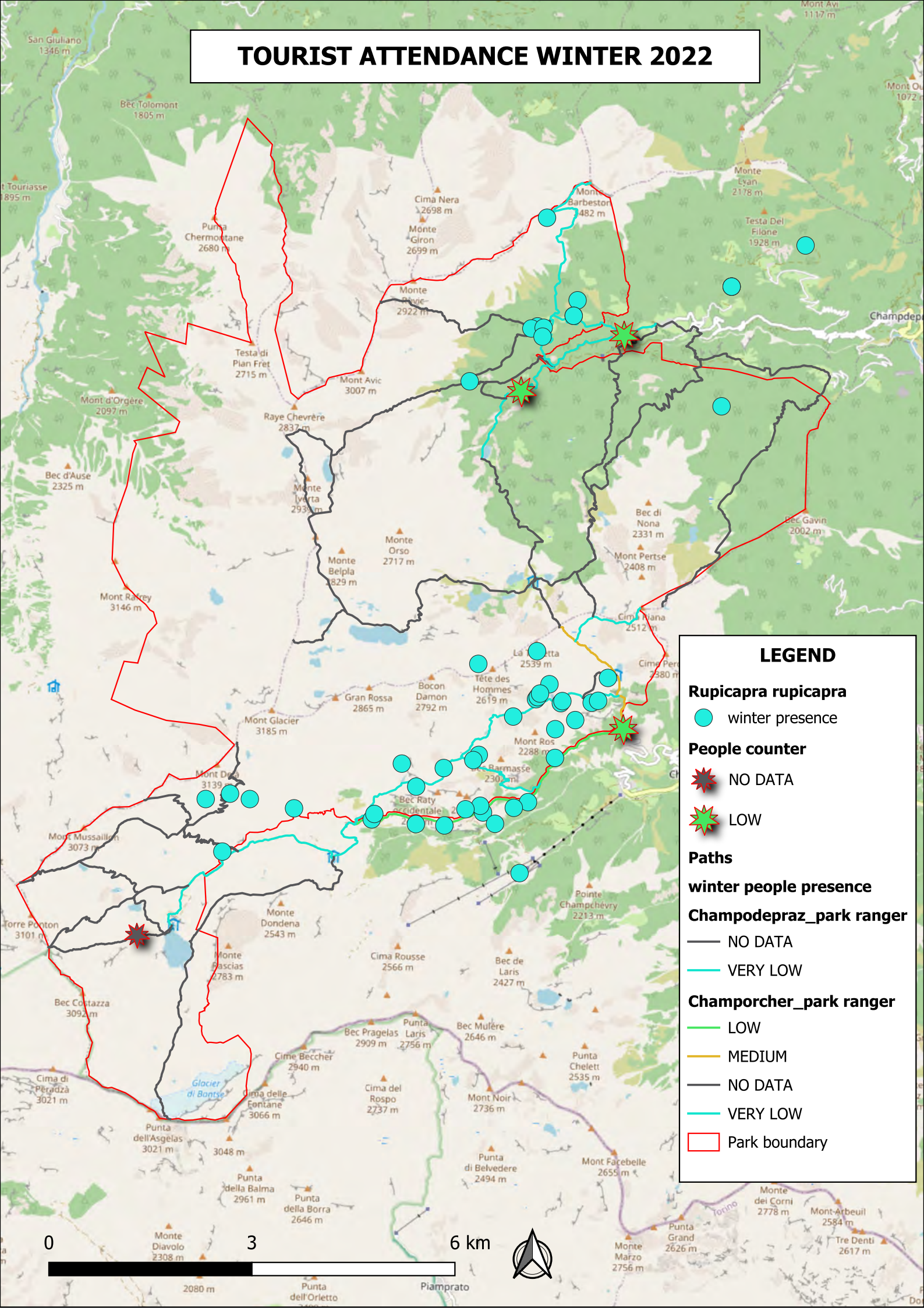
— NO DATA

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE WINTER 2022



LEGEND

Rupicapra rupicapra

● winter presence

People counter

★ NO DATA

★ LOW

Paths

— winter people presence

— Champdepraz_park ranger

— NO DATA

— VERY LOW

— Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km



2080 m

3

Piamprato

Punta dell'Orletto

Torino

Monte dei Corni 2778 m

Monte Arbeuil 2584 m

Tre Denti 2617 m

Punta Grand 2626 m

Monte Marzo 2756 m

Punta di Belvedere 2494 m

Mont Facebelle 2655 m

Punta della Borra 2646 m

Punta della Balma 2961 m

Punta dell'Asgelas 3021 m

3048 m

Cima delle Fontane 3066 m

Cima Beccher 2940 m

Cima del Rospo 2737 m

3048 m

Bec Pragelas 2909 m

Punta Laris 2756 m

Bec Mufère 2646 m

Punta Chelett 2535 m

Bec de Laris 2427 m

Cima Rousse 2566 m

Monte Dondena 2543 m

Monte Mussaillon 3073 m

Mont Dru 3139 m

Mont Glacier 3185 m

Gran Rossa 2865 m

Bocon Damon 2792 m

La Barmasse 2300 m

Tête des Hommes 2619 m

La Tetta 2539 m

Cima Perla 2380 m

Mont Ros 2288 m

Bec Raty occidentale 2200 m

Mont Pertse 2408 m

Bec di Nona 2331 m

Monte Orso 2717 m

Monte Belpia 2829 m

Monte Ivorta 2930 m

Raye Chevrère 2837 m

Testa di Plan Fret 2715 m

Monte Avic 3007 m

Monte Rivaic 2922 m

Monte Giron 2699 m

Cima Nera 2698 m

Monte Barbestor 482 m

Testa Del Filone 1928 m

Monte Lyan 2178 m

Bec Tolomont 1805 m

San Giuliano 1346 m

Mont d'Orgère 2097 m

Bec d'Ause 2325 m

Mont Rakrey 3146 m

Bec Gavin 2002 m

Monte Chermontane 2680 m

Touriasse 1895 m

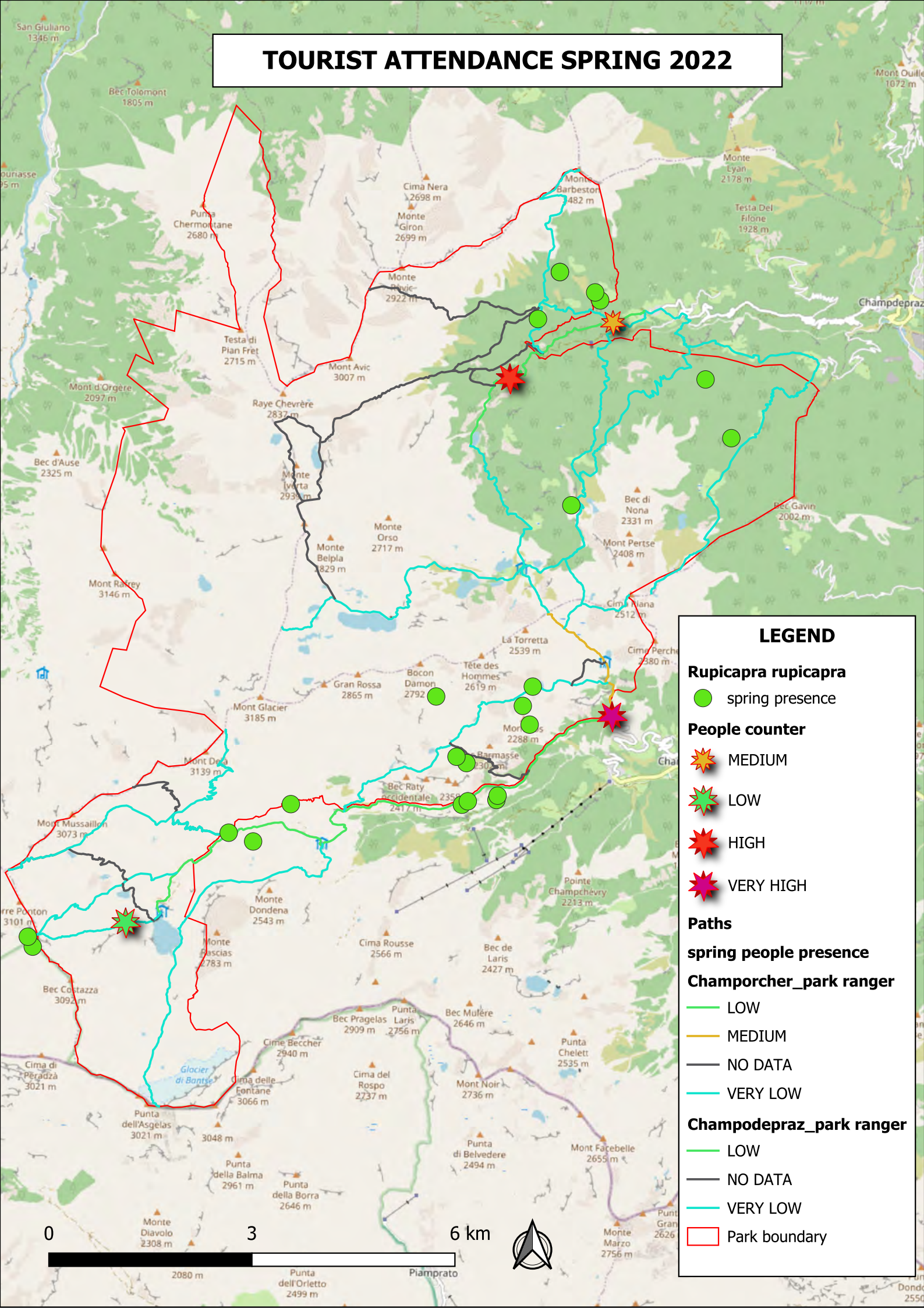
Monte Lyan 2178 m

Monte Avic 1117 m

Monte Lyan 2178 m

Monte Avic 1117 m

TOURIST ATTENDANCE SPRING 2022



LEGEND

Rupicapra rupicapra

● spring presence

People counter

★ MEDIUM

★ LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

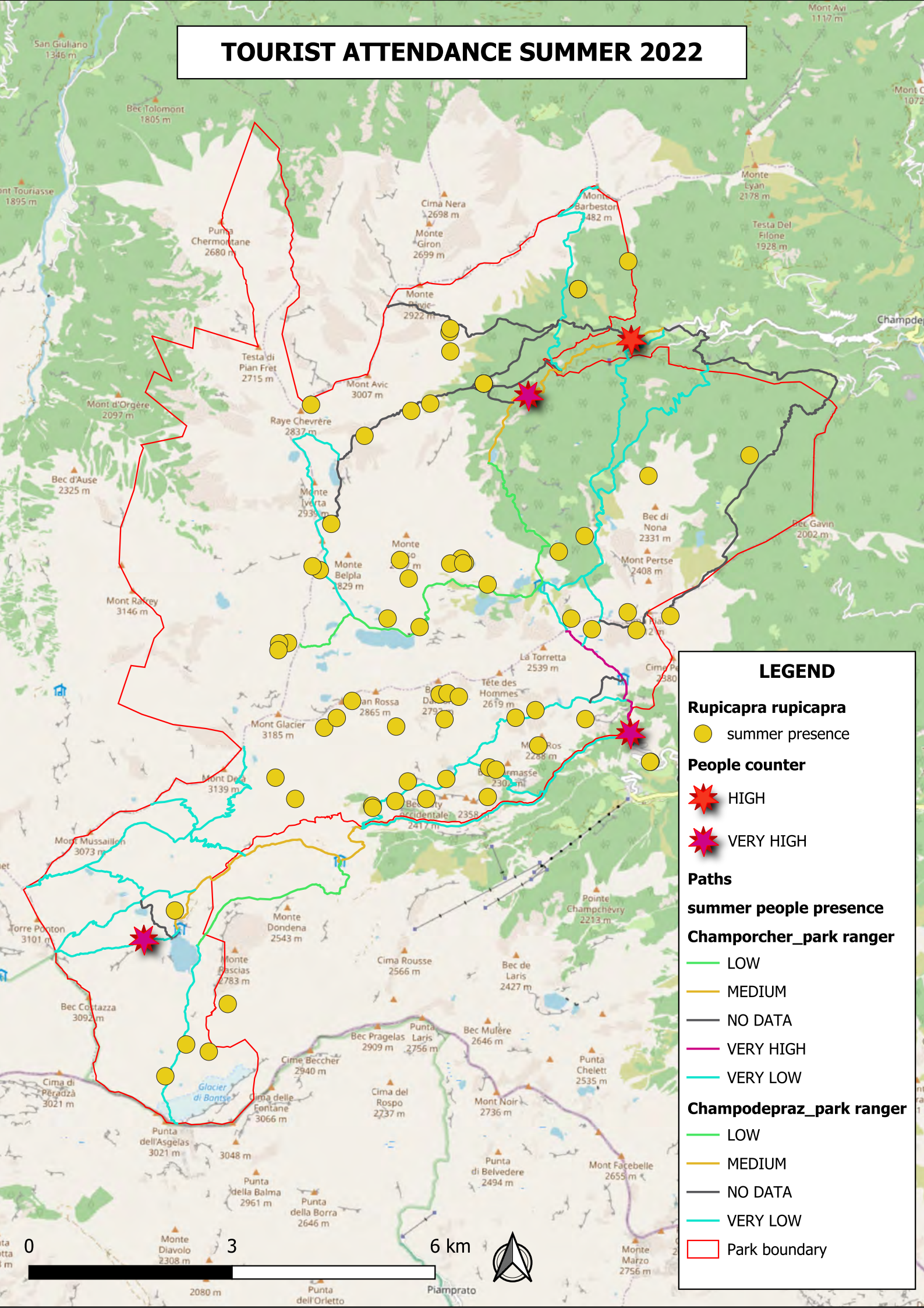
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2022



LEGEND

Rupicapra rupicapra
 ● summer presence

People counter
 ★ HIGH
 ★ VERY HIGH

Paths
 summer people presence
 Champorcher_park ranger

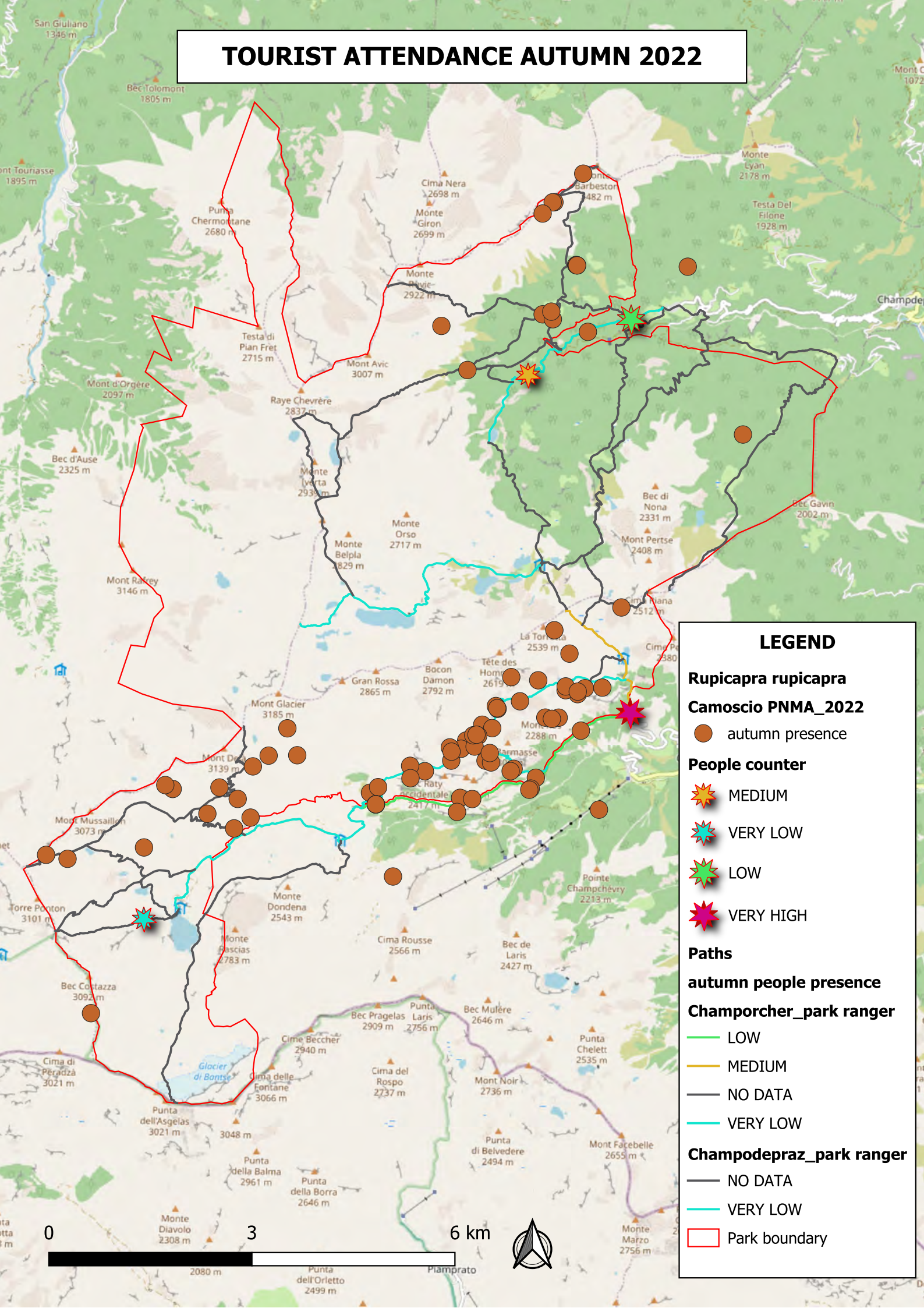
— LOW
 — MEDIUM
 — NO DATA
 — VERY HIGH
 — VERY LOW

Champodepraz_park ranger
 — LOW
 — MEDIUM
 — NO DATA
 — VERY LOW
 □ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2022



LEGEND

Rupicapra rupicapra

Camoscio PNMA_2022

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths

autumn people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champodepraz_park ranger

— NO DATA

— VERY LOW

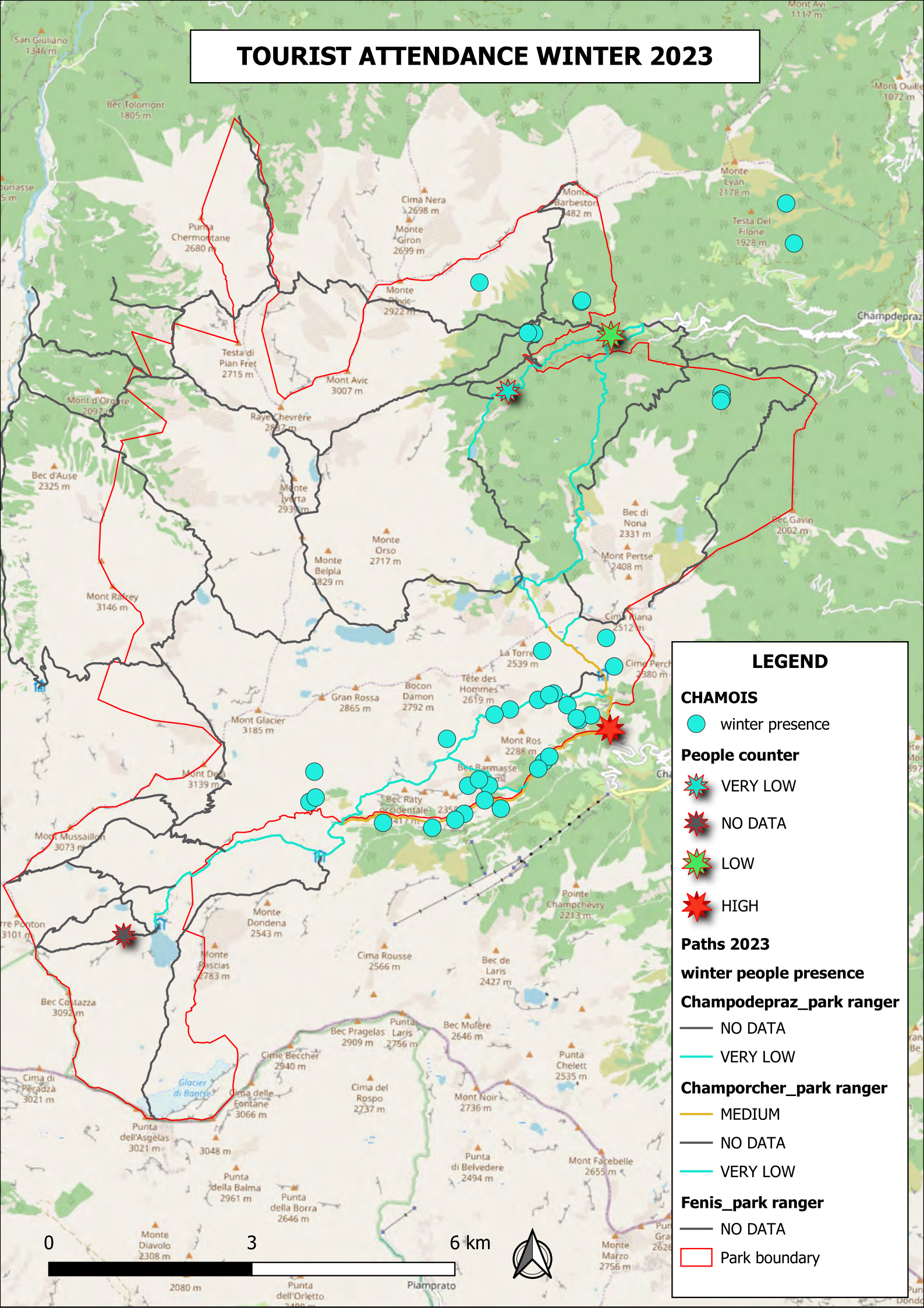
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2023



LEGEND

CHAMOIS

● winter presence

People counter

★ VERY LOW

★ NO DATA

★ LOW

★ HIGH

Paths 2023

winter people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

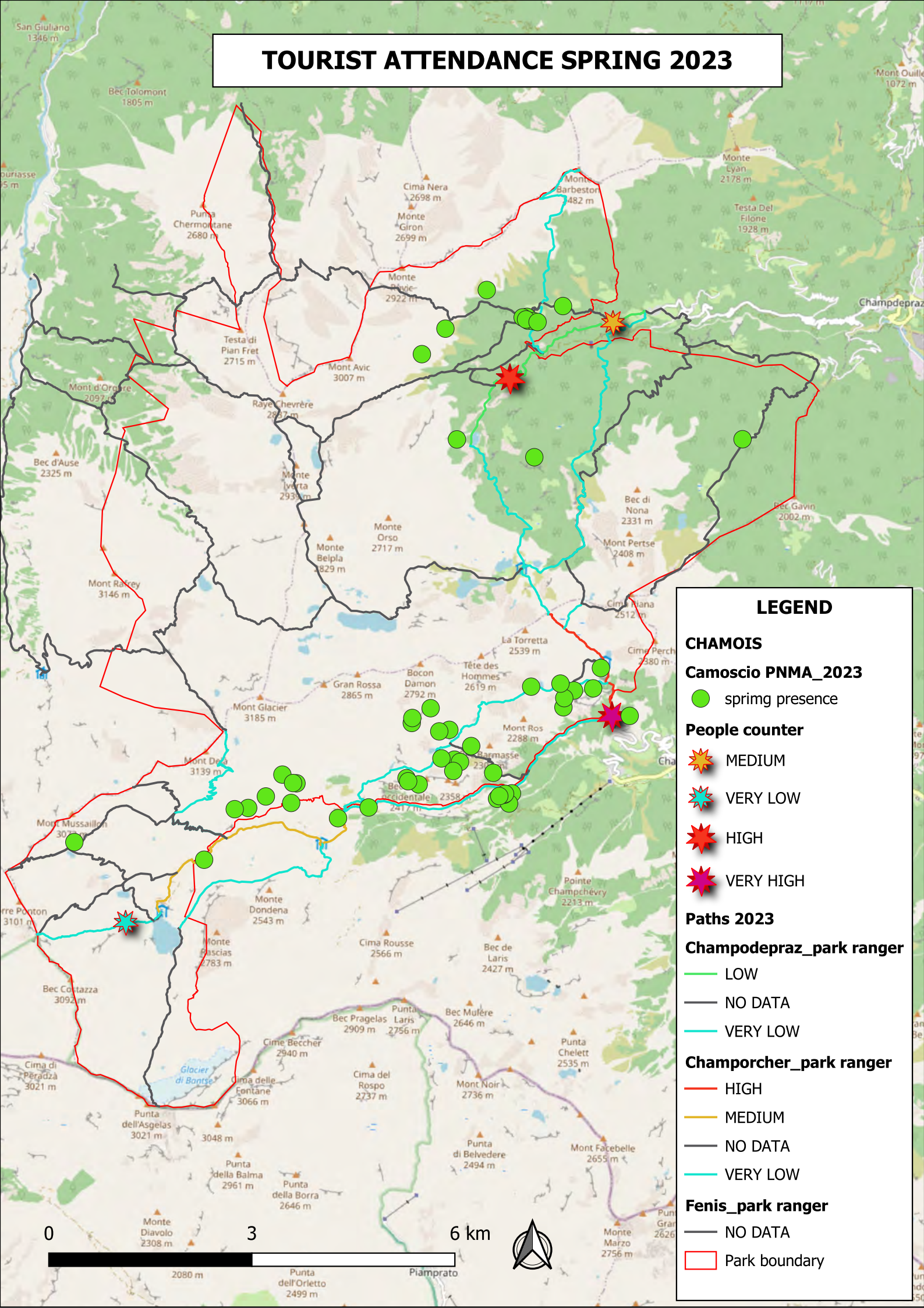
□ Park boundary

0 3 6 km



Piamptrato

TOURIST ATTENDANCE SPRING 2023



LEGEND

CHAMOIS

Camoscio PNMA_2023

- spring presence

People counter

- ★ MEDIUM
- ★ VERY LOW
- ★ HIGH
- ★ VERY HIGH

Paths 2023

Champodepraz_park ranger

- LOW
- NO DATA
- VERY LOW

Champorcher_park ranger

- HIGH
- MEDIUM
- NO DATA
- VERY LOW

Fenis_park ranger

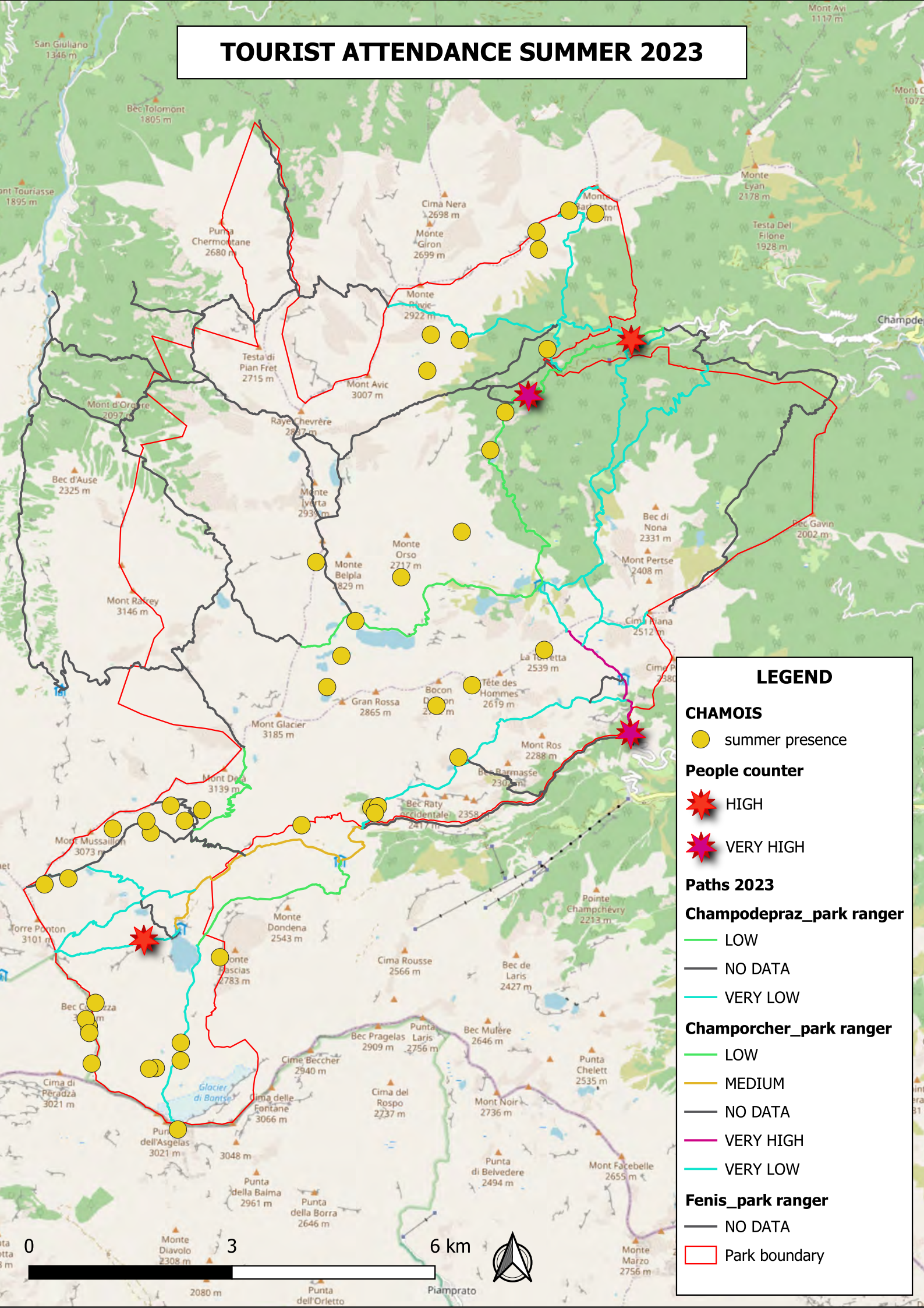
- NO DATA
- Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2023



LEGEND

CHAMOIS

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths 2023

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

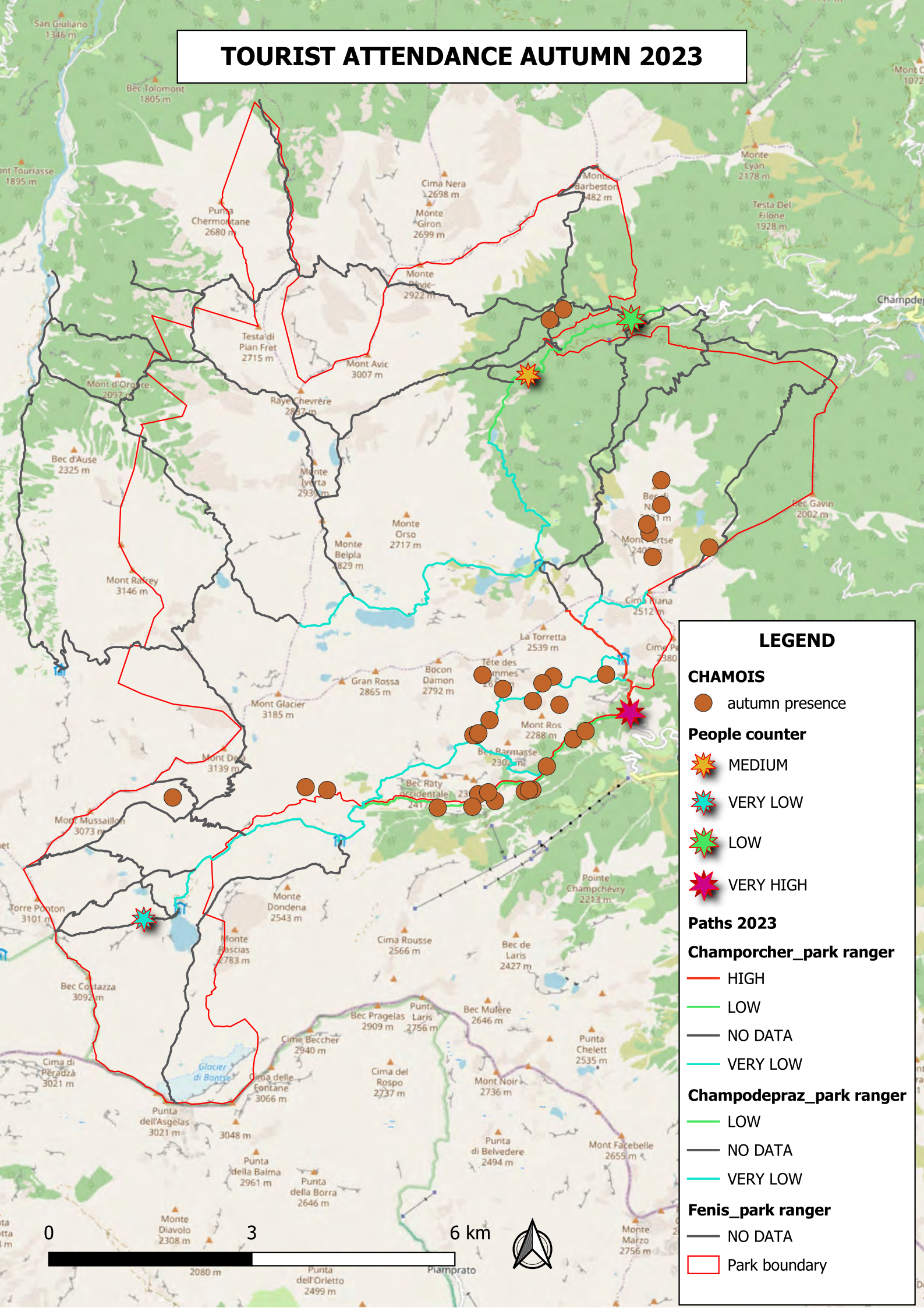
— NO DATA

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2023



LEGEND

CHAMOIS

- autumn presence

People counter

- ★ MEDIUM
- ★ VERY LOW
- ★ LOW
- ★ VERY HIGH

Paths 2023

Champorcher_park ranger

- HIGH
- LOW
- NO DATA
- VERY LOW

Champodepraz_park ranger

- LOW
- NO DATA
- VERY LOW

Fenis_park ranger

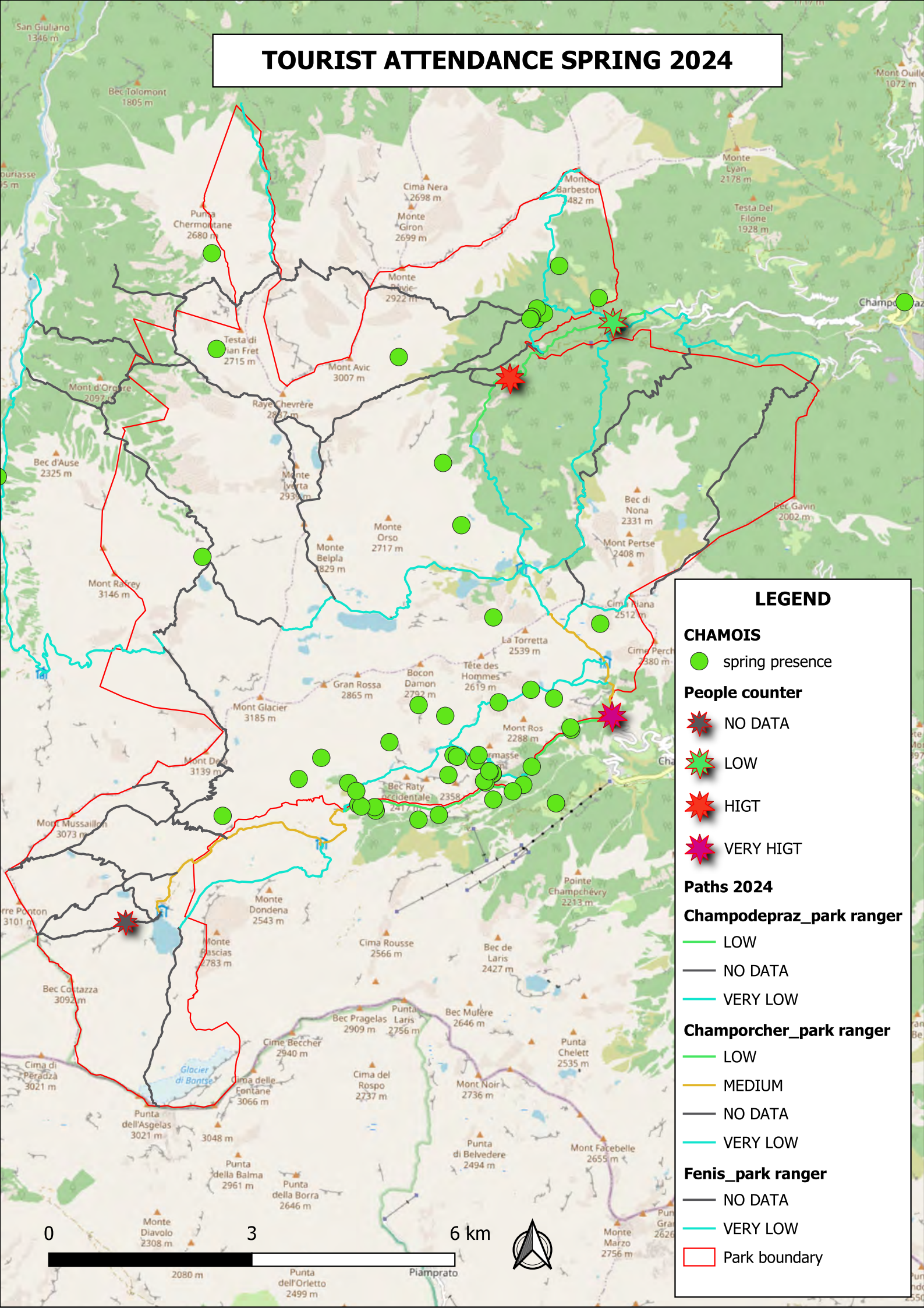
- NO DATA
- Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SPRING 2024



LEGEND

CHAMOIS

● spring presence

People counter

★ NO DATA

★ LOW

★ HIGHT

★ VERY HIGHT

Paths 2024

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

— VERY LOW

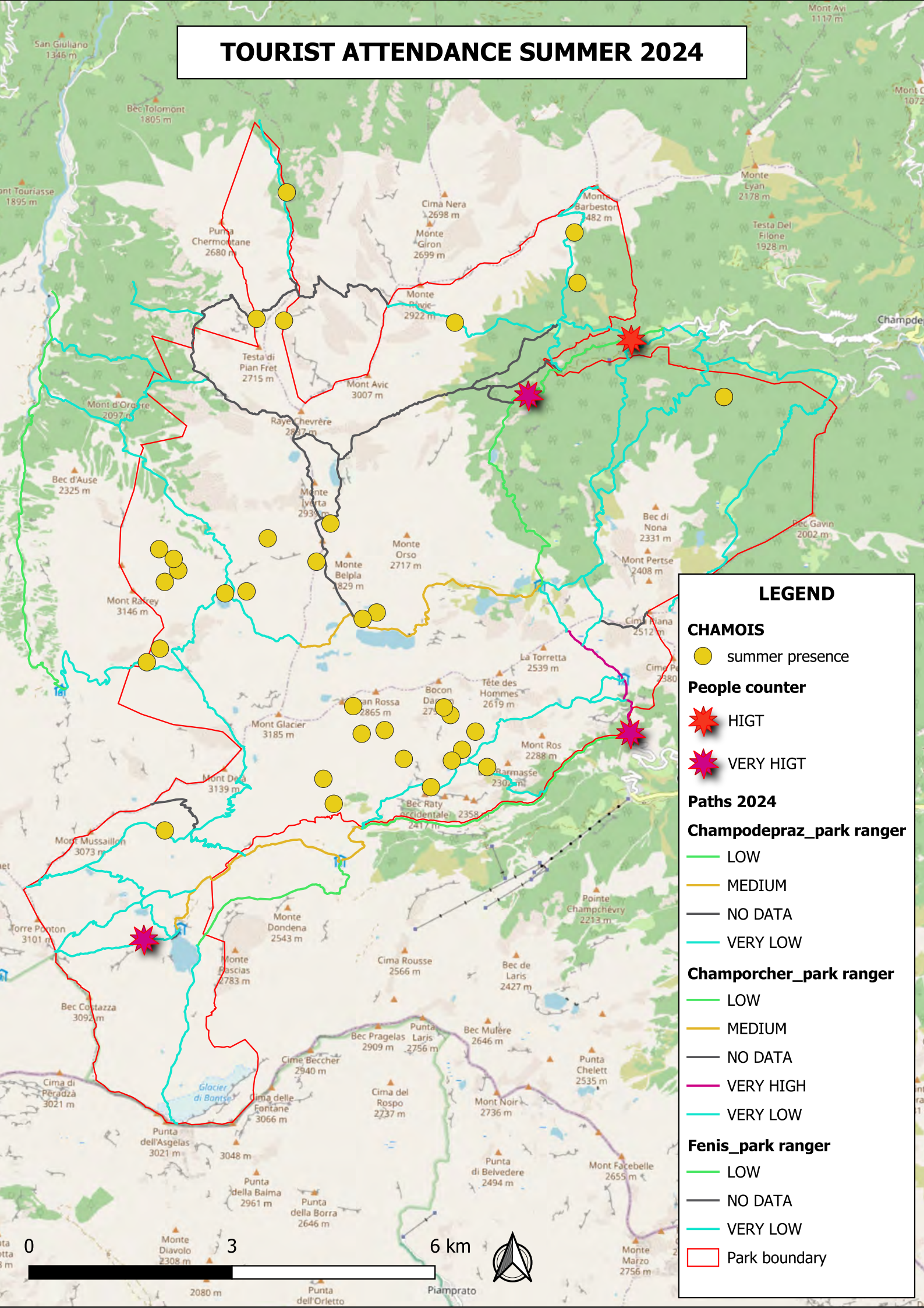
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2024



LEGEND

CHAMOIS

● summer presence

People counter

★ HIGT

★ VERY HIGT

Paths 2024

Champodepraz_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

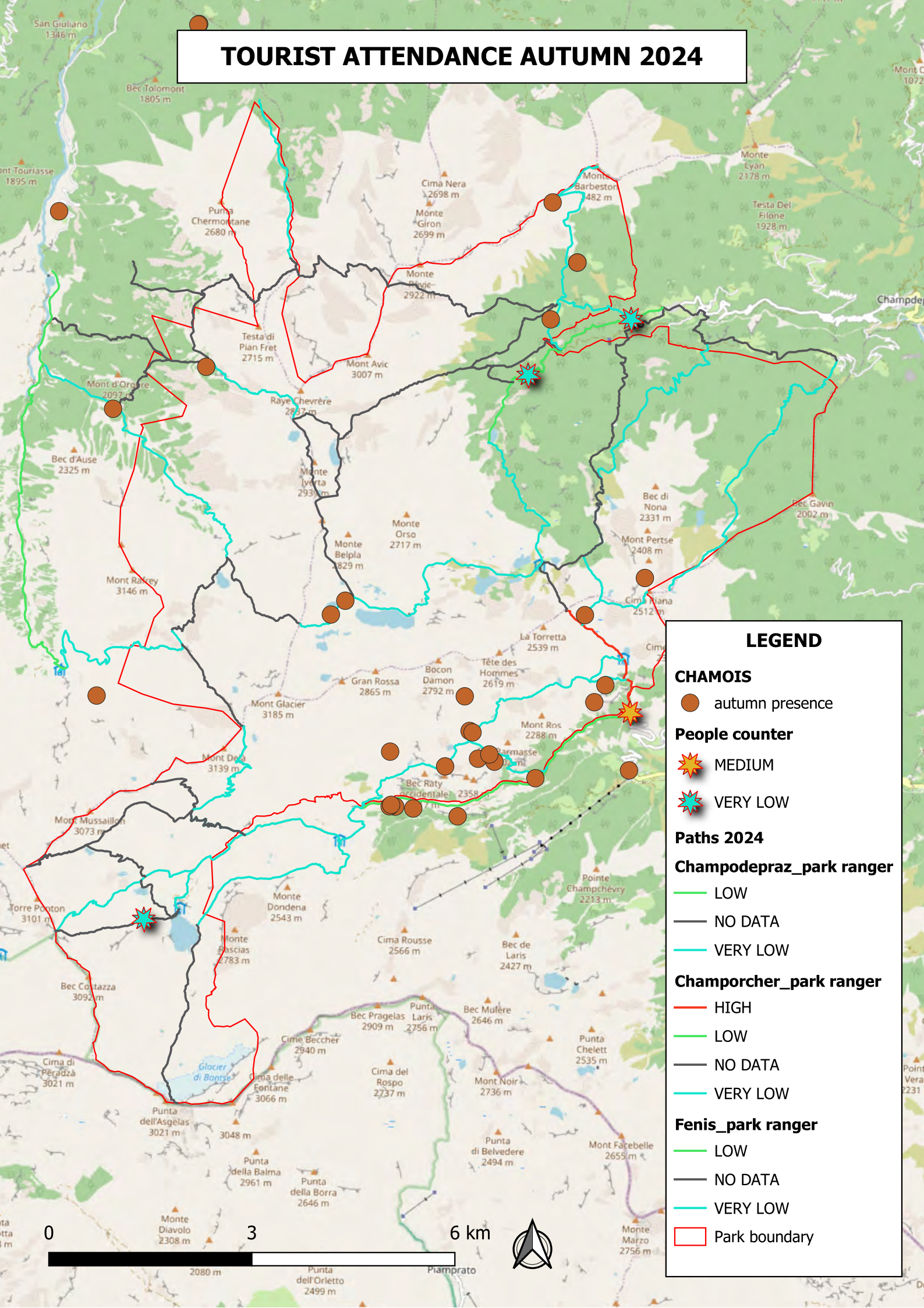
— VERY LOW

— Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2024



LEGEND

CHAMOIS

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

Paths 2024

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km

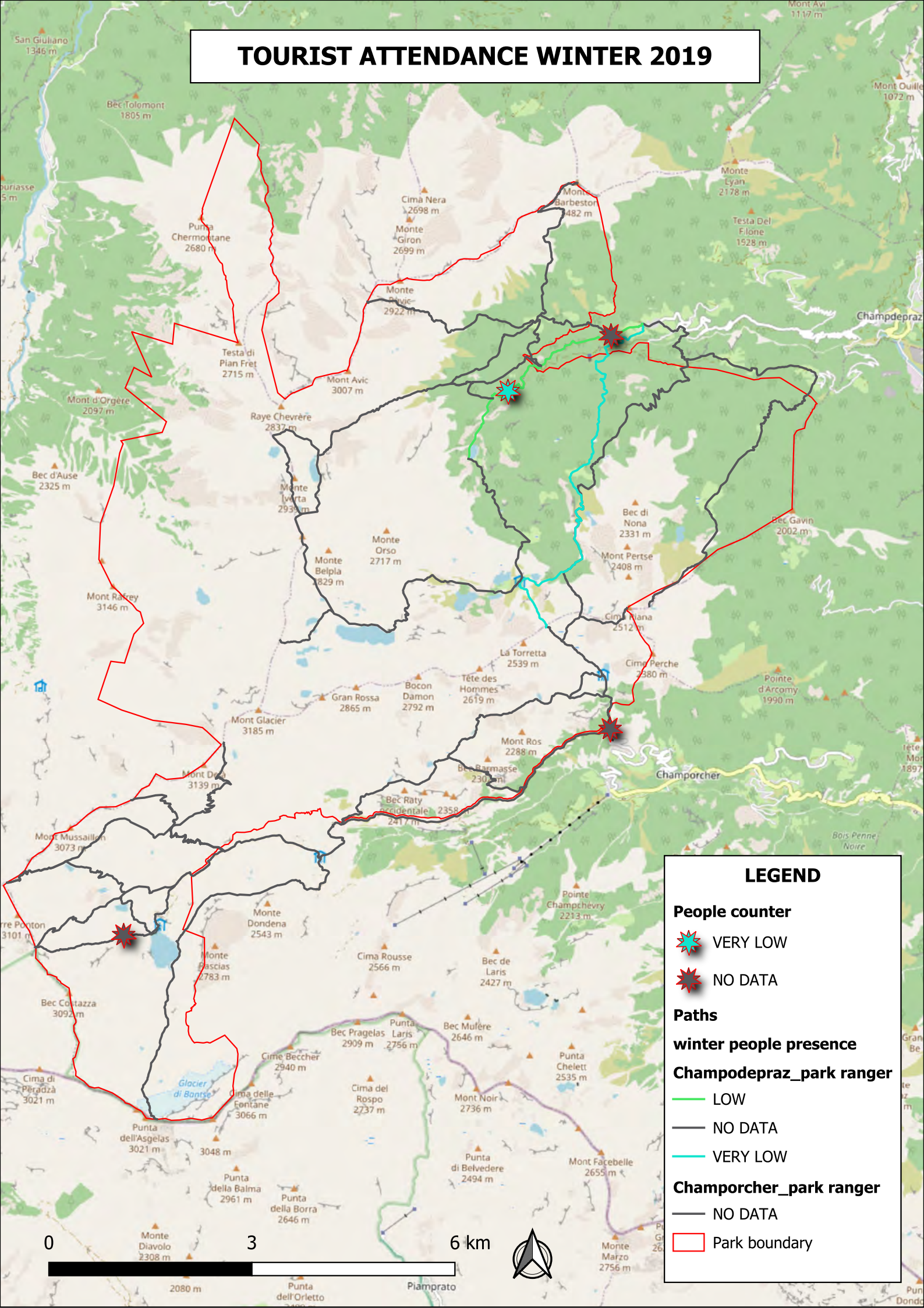


2080 m Punta dell'Orletto 2499 m Piamptrato

Annex 3 – Study Case PNMA

Disturbance from Tourists: Ibex


TOURIST ATTENDANCE WINTER 2019



LEGEND

People counter

 VERY LOW

 NO DATA

Paths

winter people presence


Champodepraz_park ranger

 LOW

 NO DATA

 VERY LOW

Champorcher_park ranger

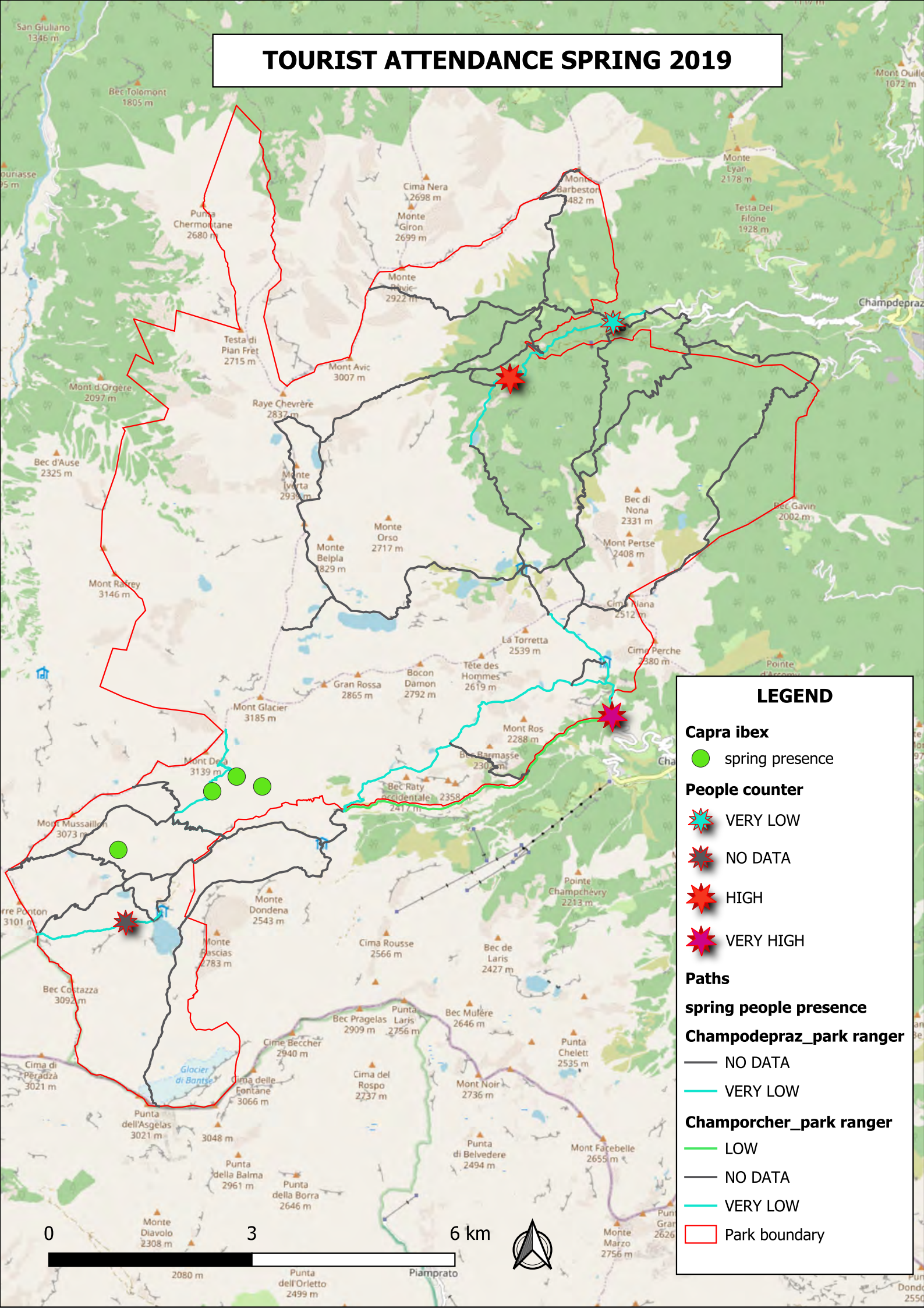
 NO DATA

 Park boundary

0 3 6 km



TOURIST ATTENDANCE SPRING 2019



LEGEND

Capra ibex

● spring presence

People counter

★ VERY LOW

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km

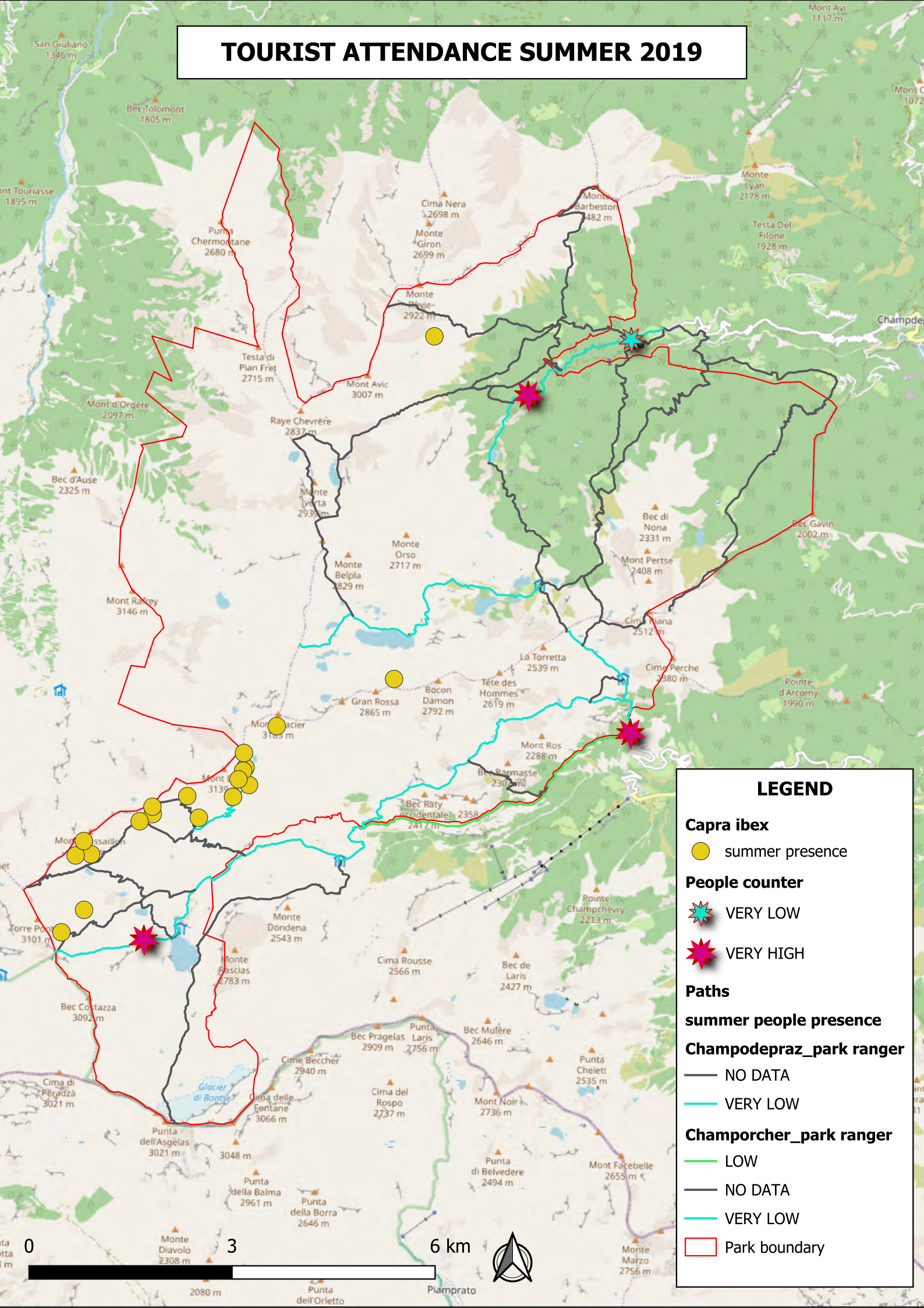


2080 m


Punta dell'Orletto 2499 m

Piamptrato

TOURIST ATTENDANCE SUMMER 2019




LEGEND



Capra ibex
 summer presence


People counter
 VERY LOW

 VERY HIGH

Paths
summer people presence
Champdepraz_park ranger

— NO DATA
 VERY LOW

Champorcher_park ranger
 LOW
 — NO DATA
 VERY LOW

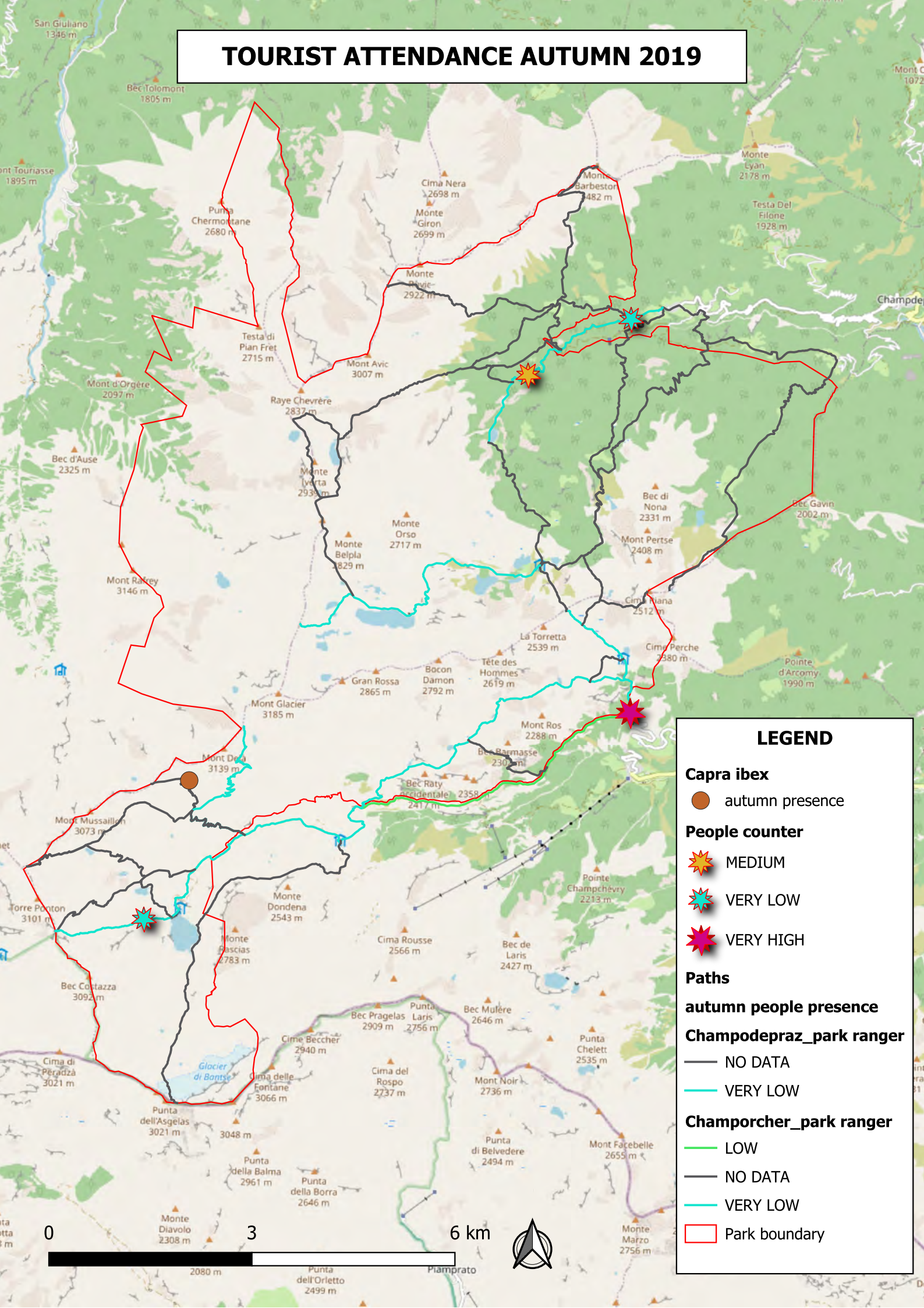
 Park boundary

0 3 6 km




2080 m 3048 m 3066 m 3021 m 2961 m 2646 m 2736 m 2655 m 2756 m

TOURIST ATTENDANCE AUTUMN 2019



LEGEND

Capra ibex
 autumn presence

People counter

 MEDIUM

 VERY LOW

 VERY HIGH

Paths

autumn people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

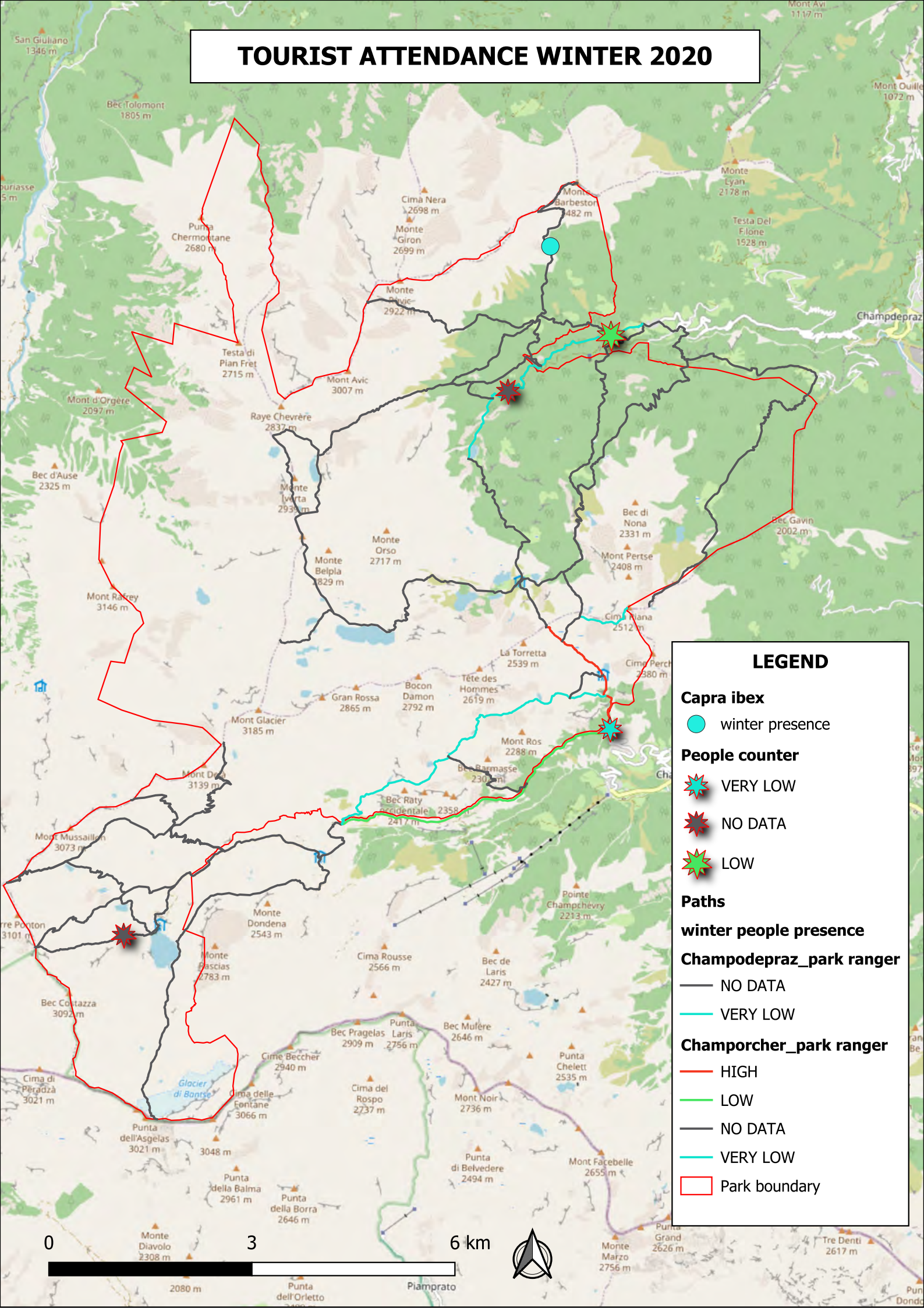
— VERY LOW

— Park boundary

0 3 6 km



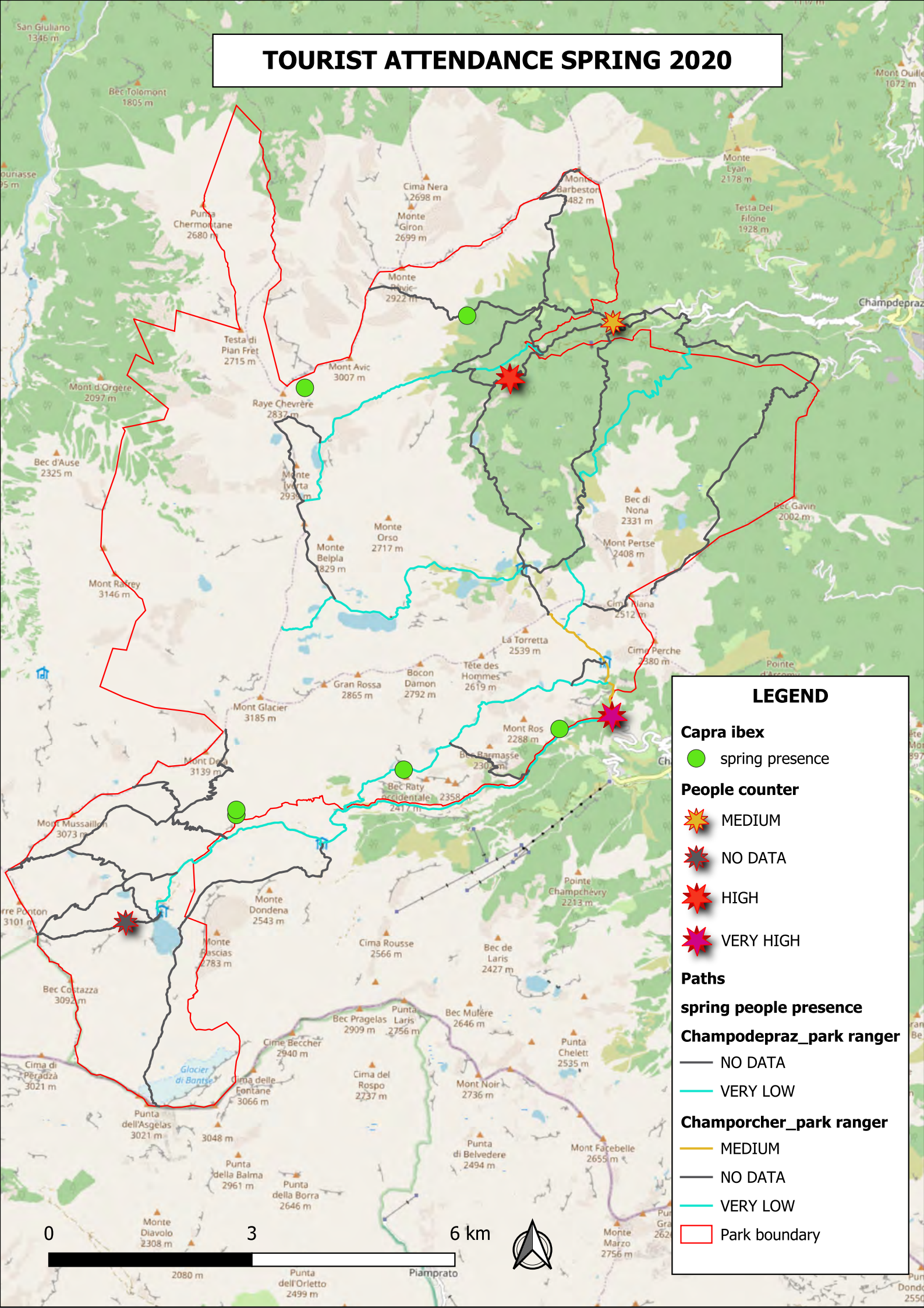
TOURIST ATTENDANCE WINTER 2020




0 3 6 km



TOURIST ATTENDANCE SPRING 2020




LEGEND

Capra ibex
 spring presence

People counter

 MEDIUM

 NO DATA

 HIGH

 VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

 NO DATA

 VERY LOW

Champorcher_park ranger

 MEDIUM

 NO DATA

 VERY LOW

 Park boundary

0 3 6 km

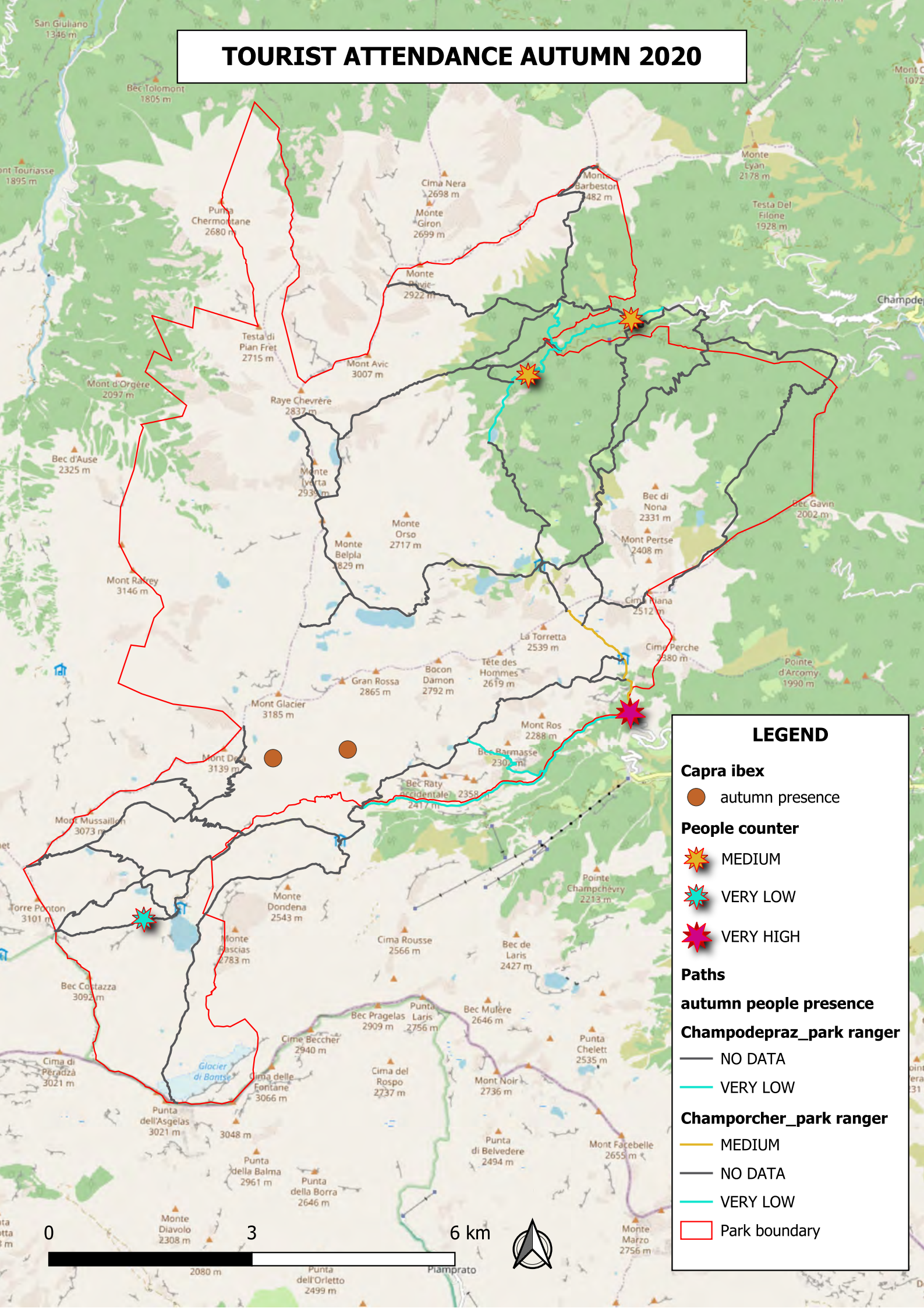


2080 m

Punta dell'Orletto 2499 m

Piamptrato

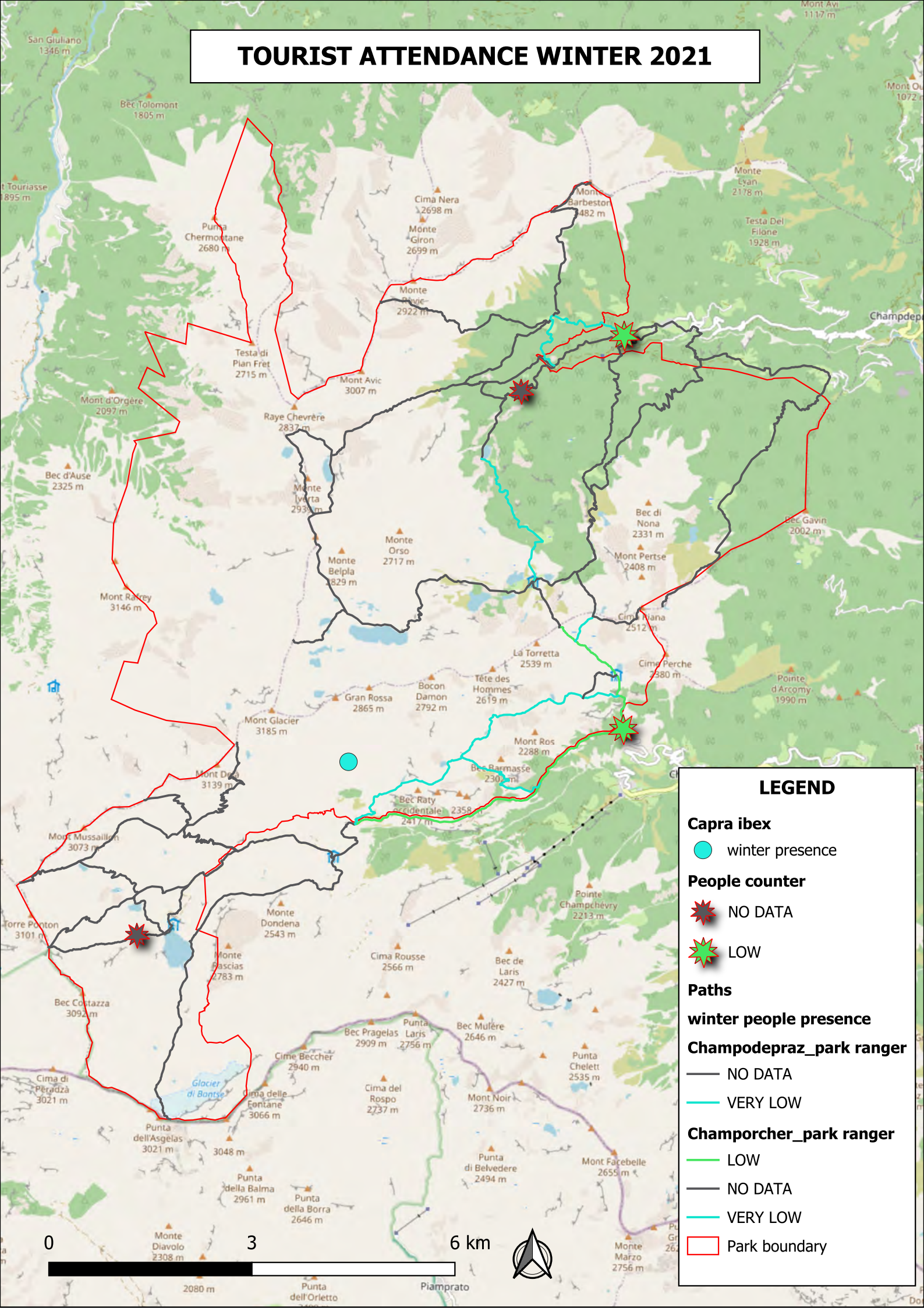
TOURIST ATTENDANCE AUTUMN 2020



LEGEND

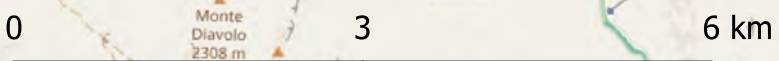
- Capra ibex**
 - autumn presence
- People counter**
 - ★ MEDIUM
 - ★ VERY LOW
 - ★ VERY HIGH
- Paths**
 - autumn people presence
 - Champodepraz_park ranger
 - NO DATA
 - VERY LOW
 - Champorcher_park ranger
 - MEDIUM
 - NO DATA
 - VERY LOW
 - Park boundary

TOURIST ATTENDANCE WINTER 2021

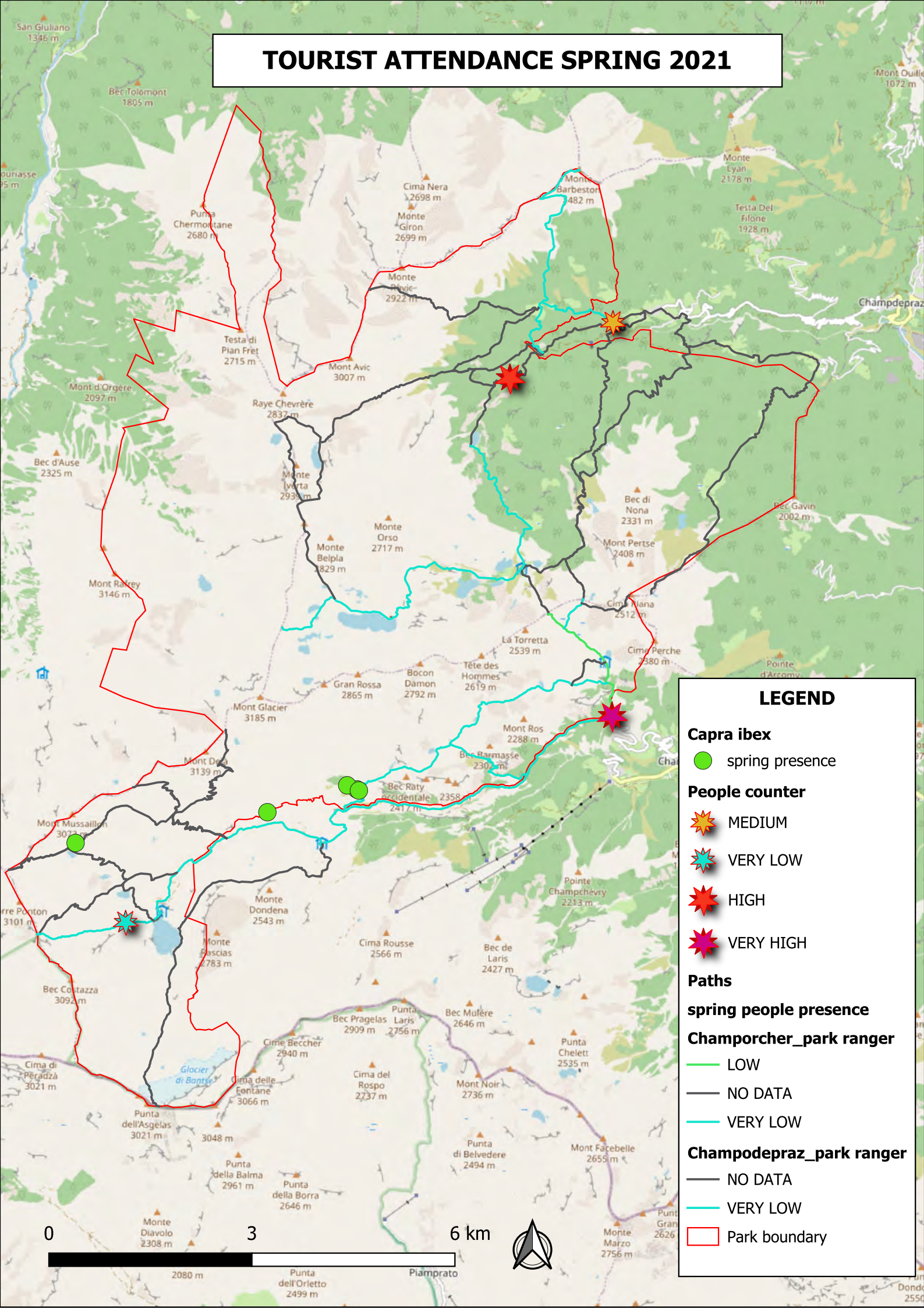


LEGEND

- Capra ibex**
- winter presence
- People counter**
- ★ NO DATA
- ★ LOW
- Paths**
- winter people presence
- Champdepraz_park ranger
- NO DATA
- VERY LOW
- Champorcher_park ranger
- LOW
- NO DATA
- VERY LOW
- Park boundary



TOURIST ATTENDANCE SPRING 2021



LEGEND

Capra ibex

● spring presence

People counter

★ MEDIUM

★ VERY LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

Champodepraz_park ranger

— NO DATA

— VERY LOW

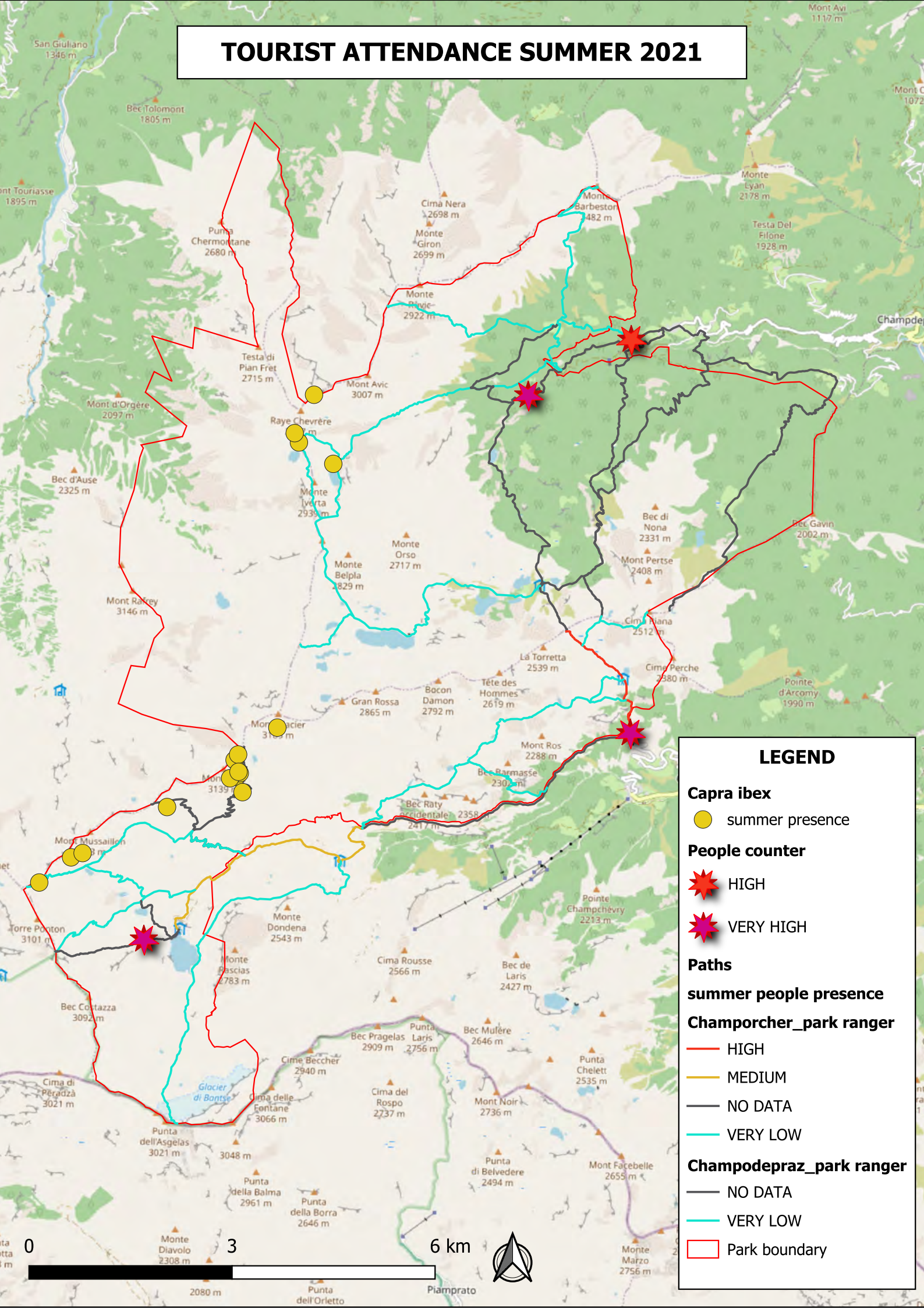
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2021



LEGEND

Capra ibex

- summer presence

People counter

- ★ HIGH
- ★ VERY HIGH

Paths

summer people presence

Champorcher_park ranger

- HIGH
- MEDIUM
- NO DATA
- VERY LOW

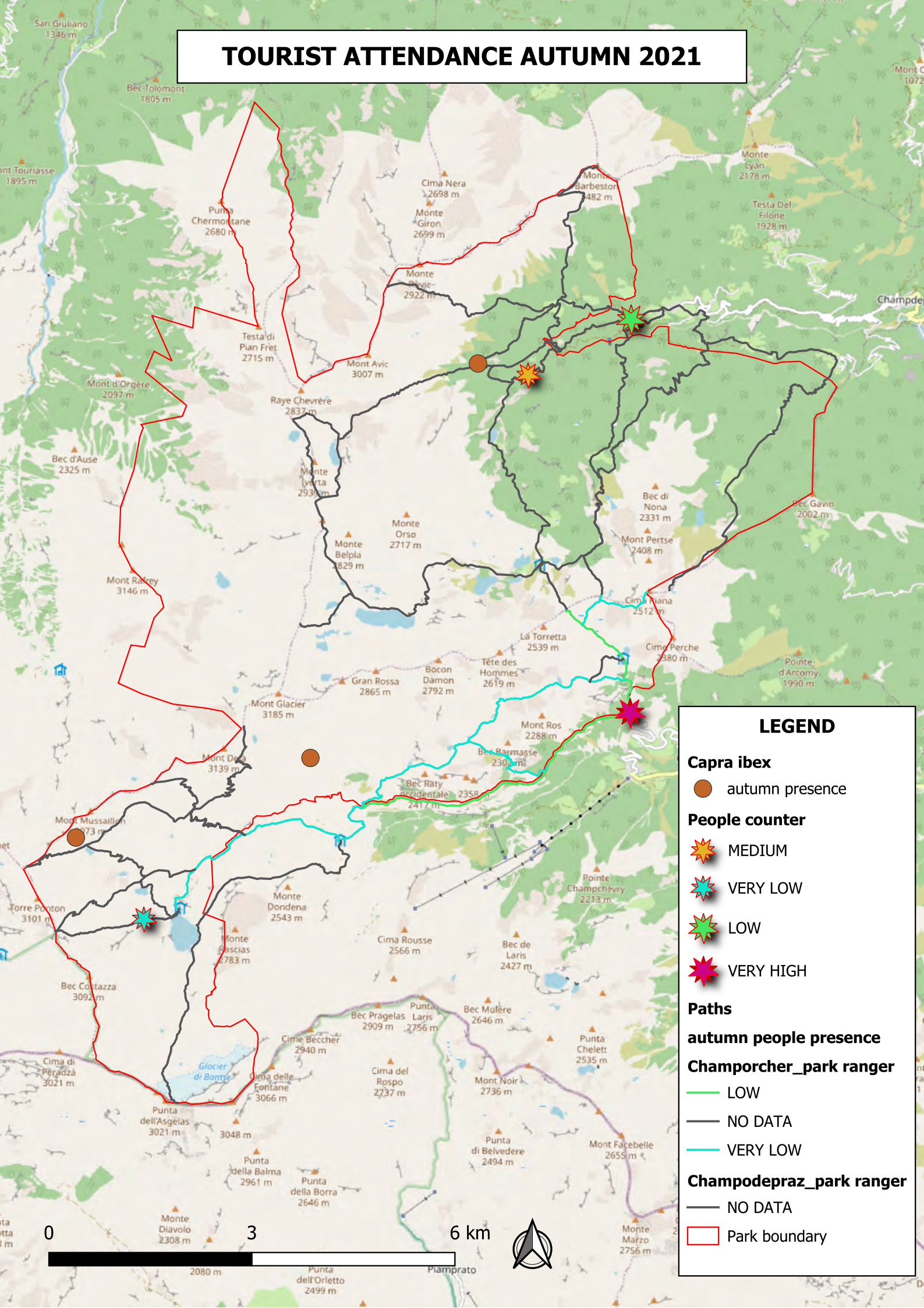
Champodepraz_park ranger

- NO DATA
- VERY LOW
- Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2021



LEGEND

Capra ibex
 autumn presence

People counter

 MEDIUM

 VERY LOW

 LOW

 VERY HIGH

Paths


Champorcher_park ranger


 LOW

 NO DATA

 VERY LOW

Champodepraz_park ranger

 NO DATA

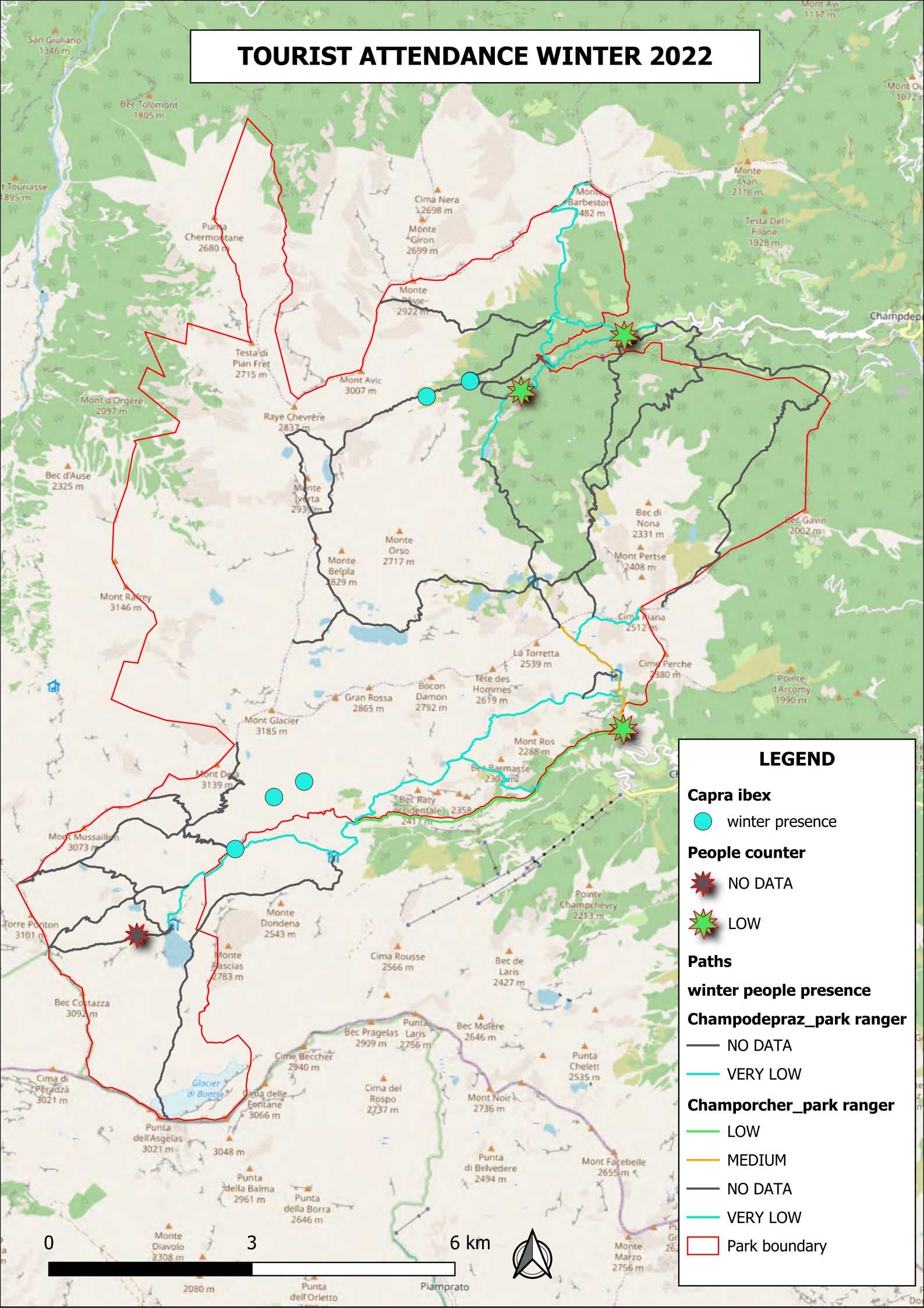
 Park boundary

0 3 6 km

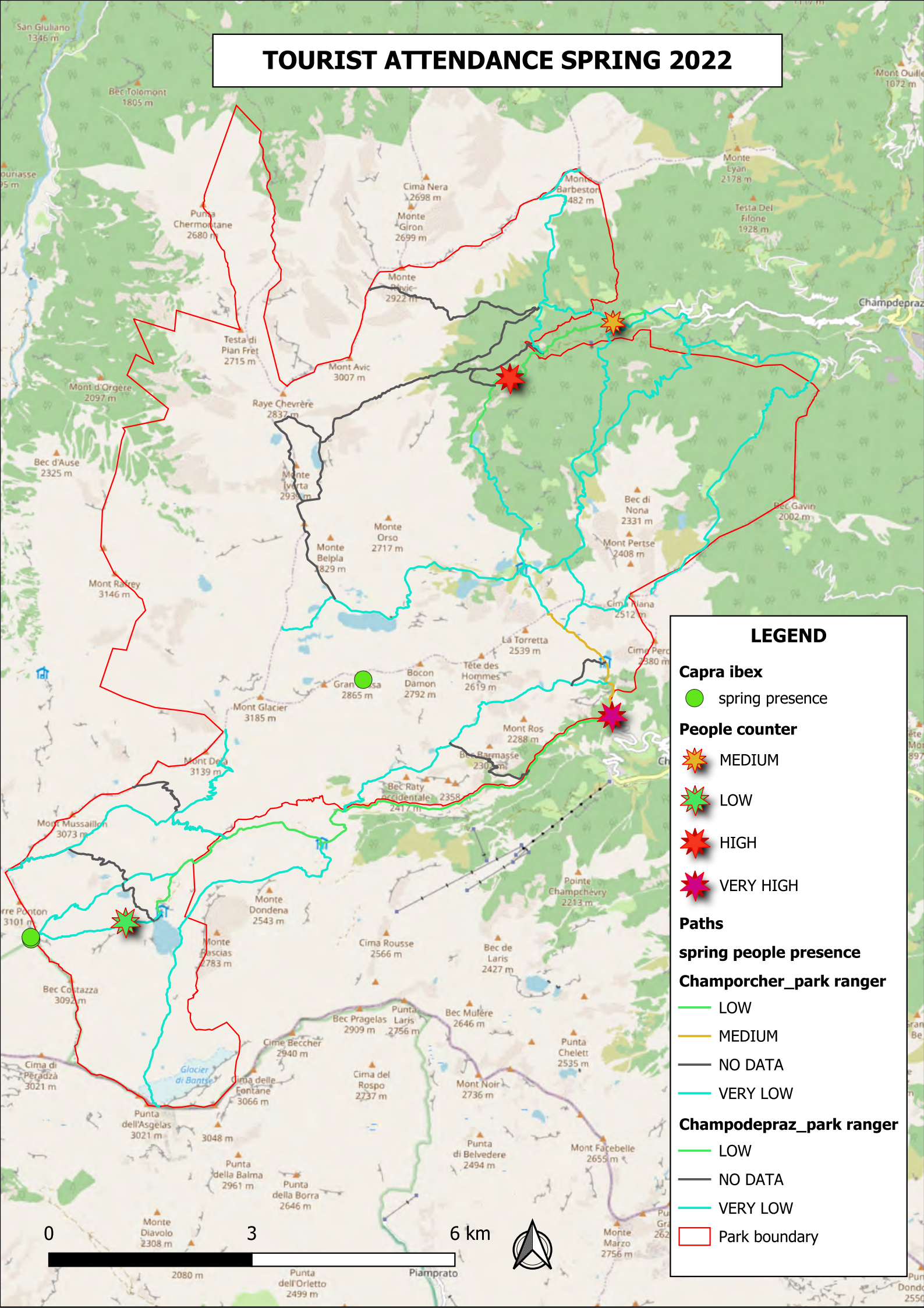


2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2022



TOURIST ATTENDANCE SPRING 2022



LEGEND

Capra ibex

● spring presence

People counter

★ MEDIUM

★ LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

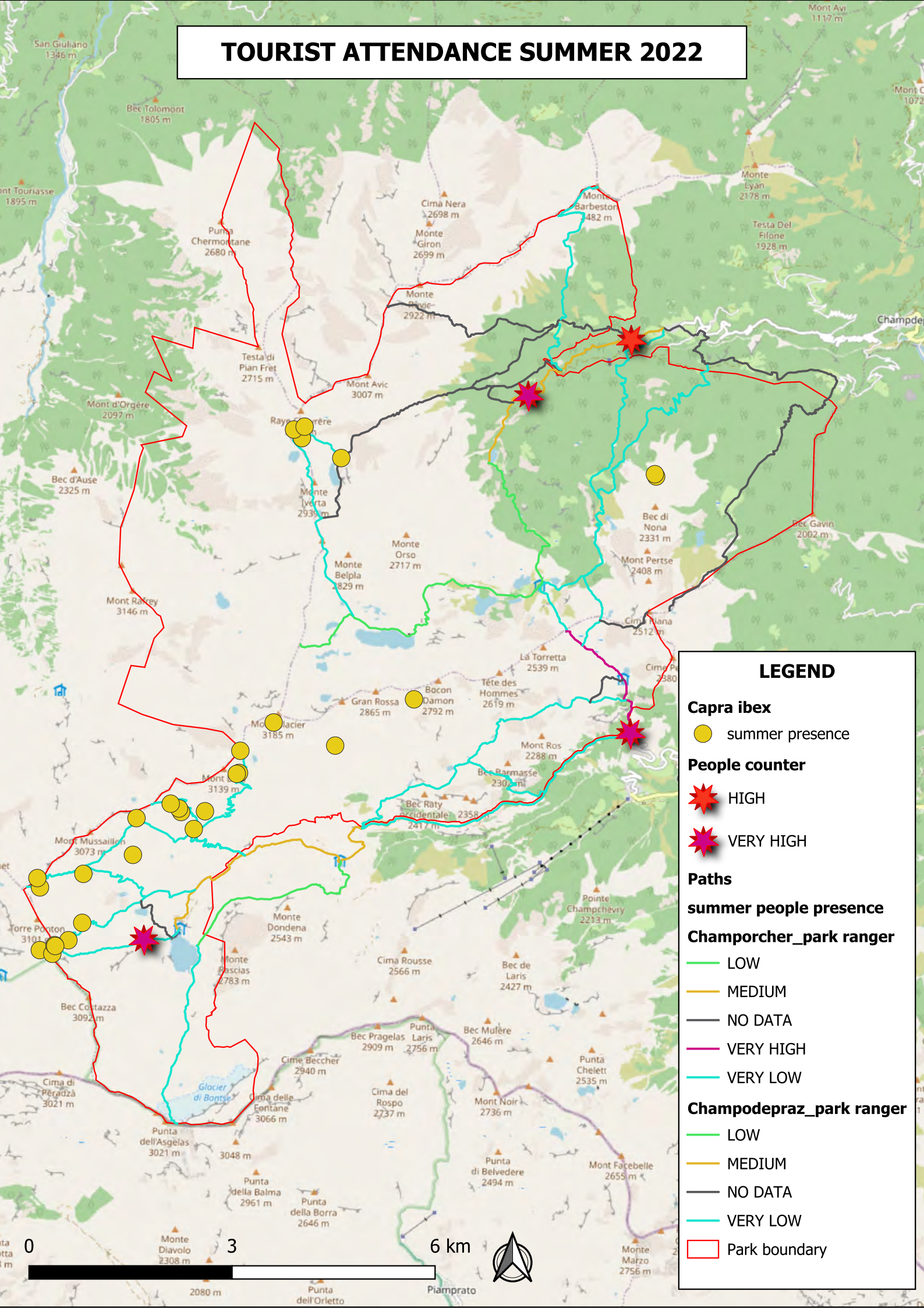
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2022



LEGEND

Capra ibex

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Champodepraz_park ranger

— LOW

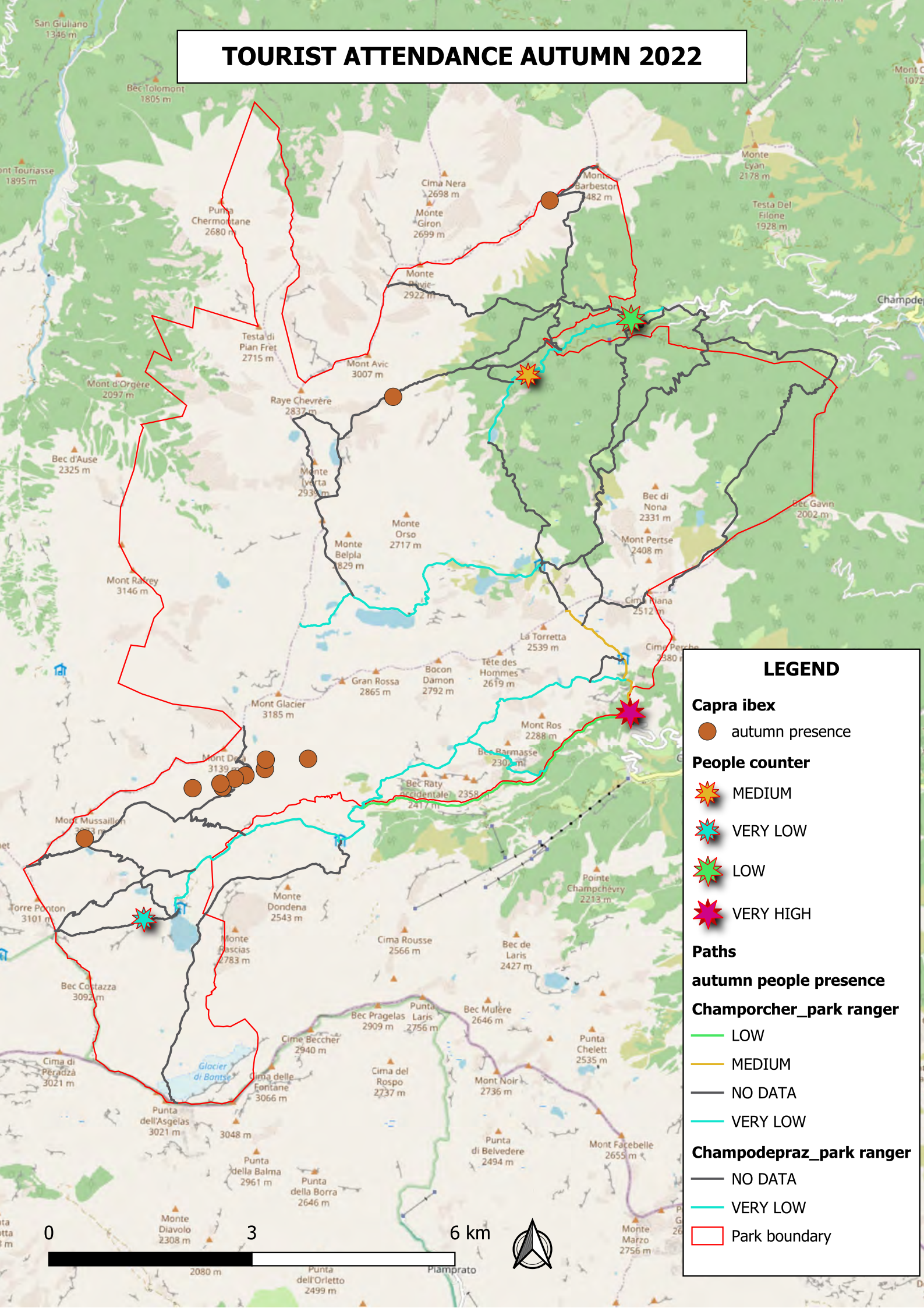
— MEDIUM

— NO DATA


— VERY LOW

□ Park boundary

TOURIST ATTENDANCE AUTUMN 2022



LEGEND

Capra ibex
 autumn presence

People counter

 MEDIUM

 VERY LOW

 LOW

 VERY HIGH


Paths

autumn people presence

Champorcher_park ranger

 LOW

 MEDIUM

 NO DATA

 VERY LOW

Champodepraz_park ranger

 NO DATA

 VERY LOW

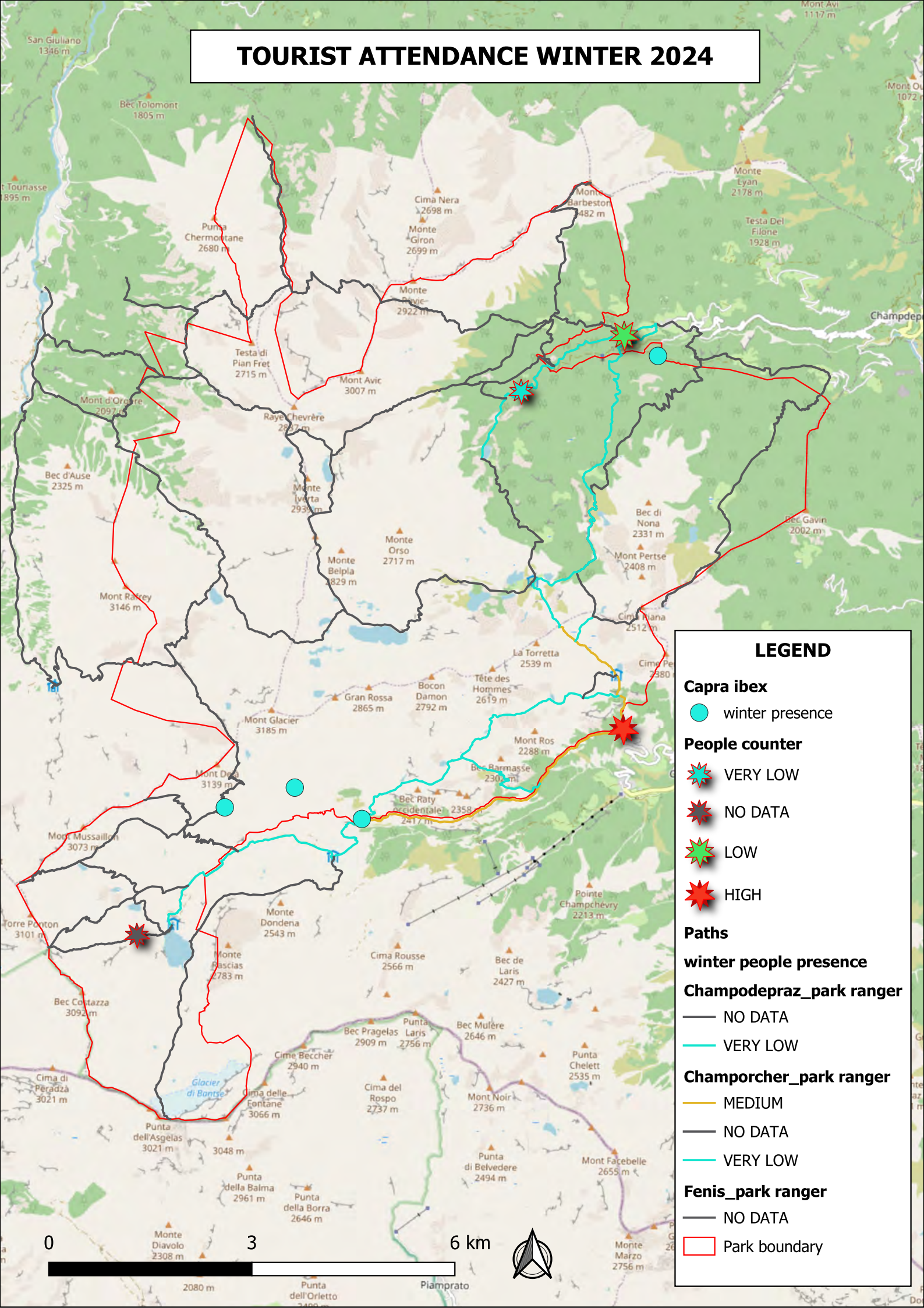
 Park boundary

0 3 6 km




2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2024








LEGEND



Capra ibex
 winter presence

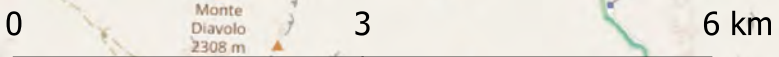
People counter
 VERY LOW
 NO DATA
 LOW
 HIGH

Paths
winter people presence

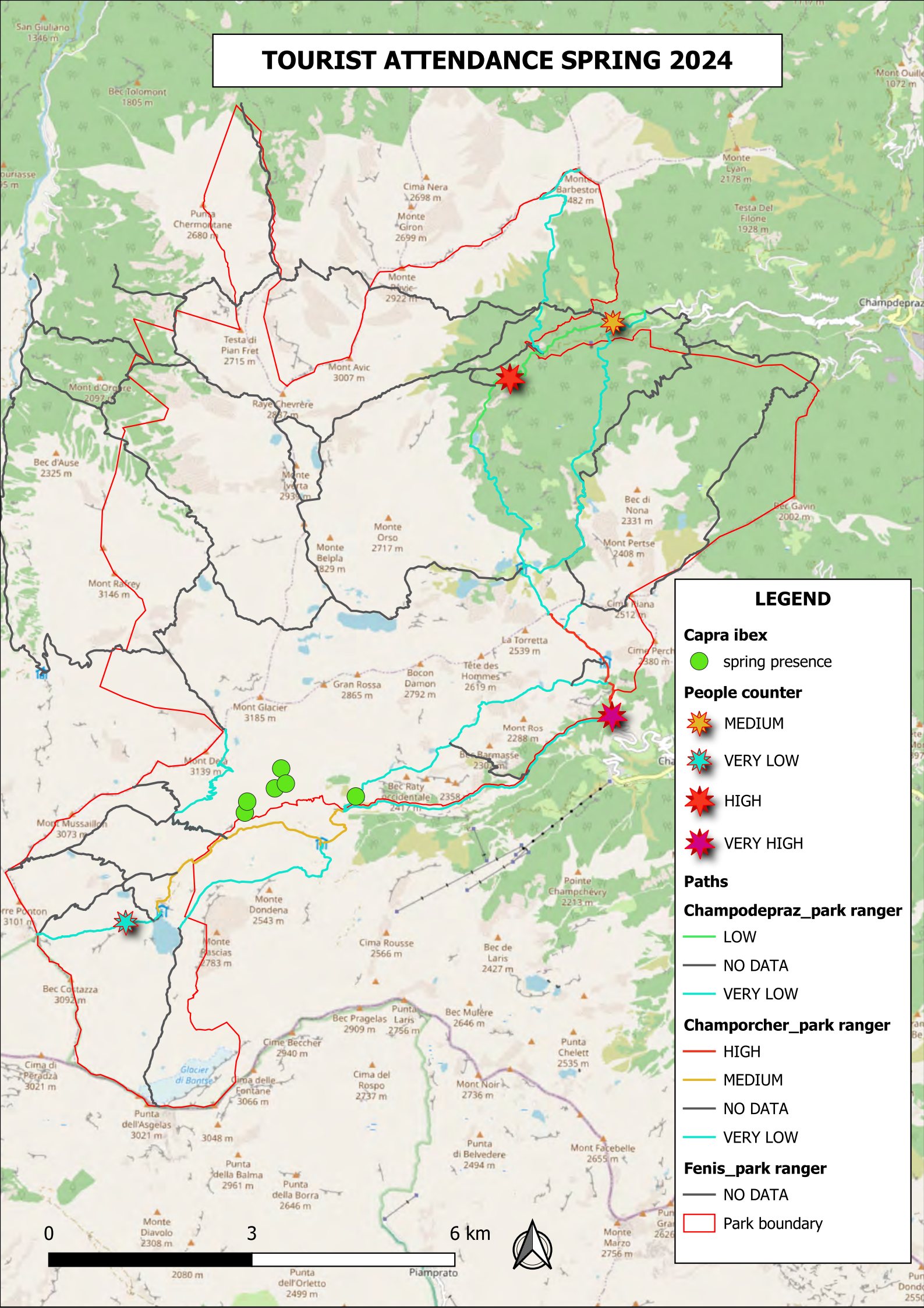
Champodepraz_park ranger
 NO DATA
 VERY LOW

Champorcher_park ranger
 MEDIUM
 NO DATA
 VERY LOW

Fenis_park ranger
 NO DATA
 Park boundary



TOURIST ATTENDANCE SPRING 2024



LEGEND

Capra ibex

● spring presence

People counter

★ MEDIUM

★ VERY LOW

★ HIGH

★ VERY HIGH

Paths

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

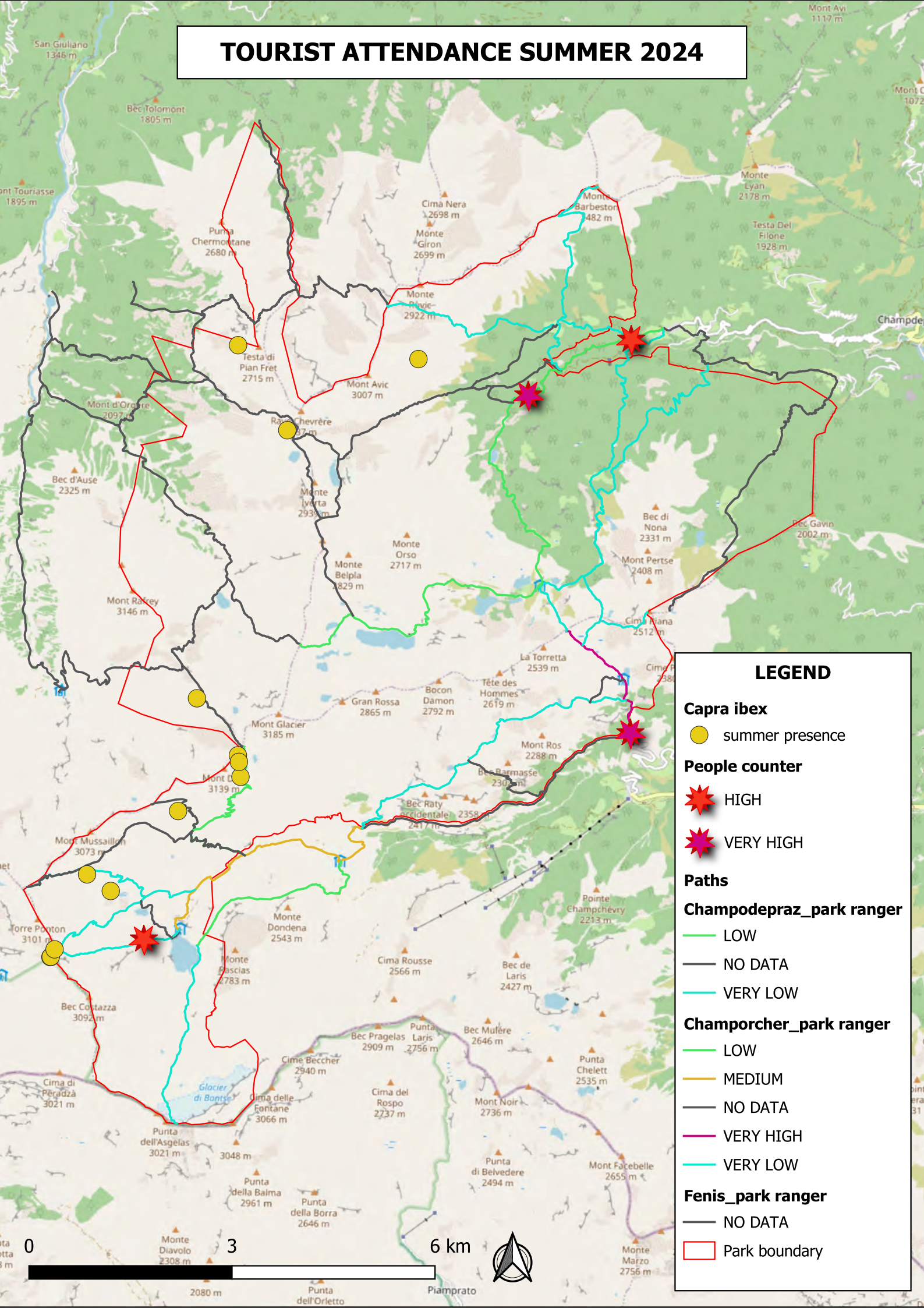
□ Park boundary

0 3 6 km





2080 m Punta dell'Orletto 2499 m Piamptrato




TOURIST ATTENDANCE SUMMER 2024










LEGEND

Capra ibex
 summer presence

People counter
 HIGH
 VERY HIGH

Paths
Champodepraz_park ranger
 LOW
 NO DATA
 VERY LOW

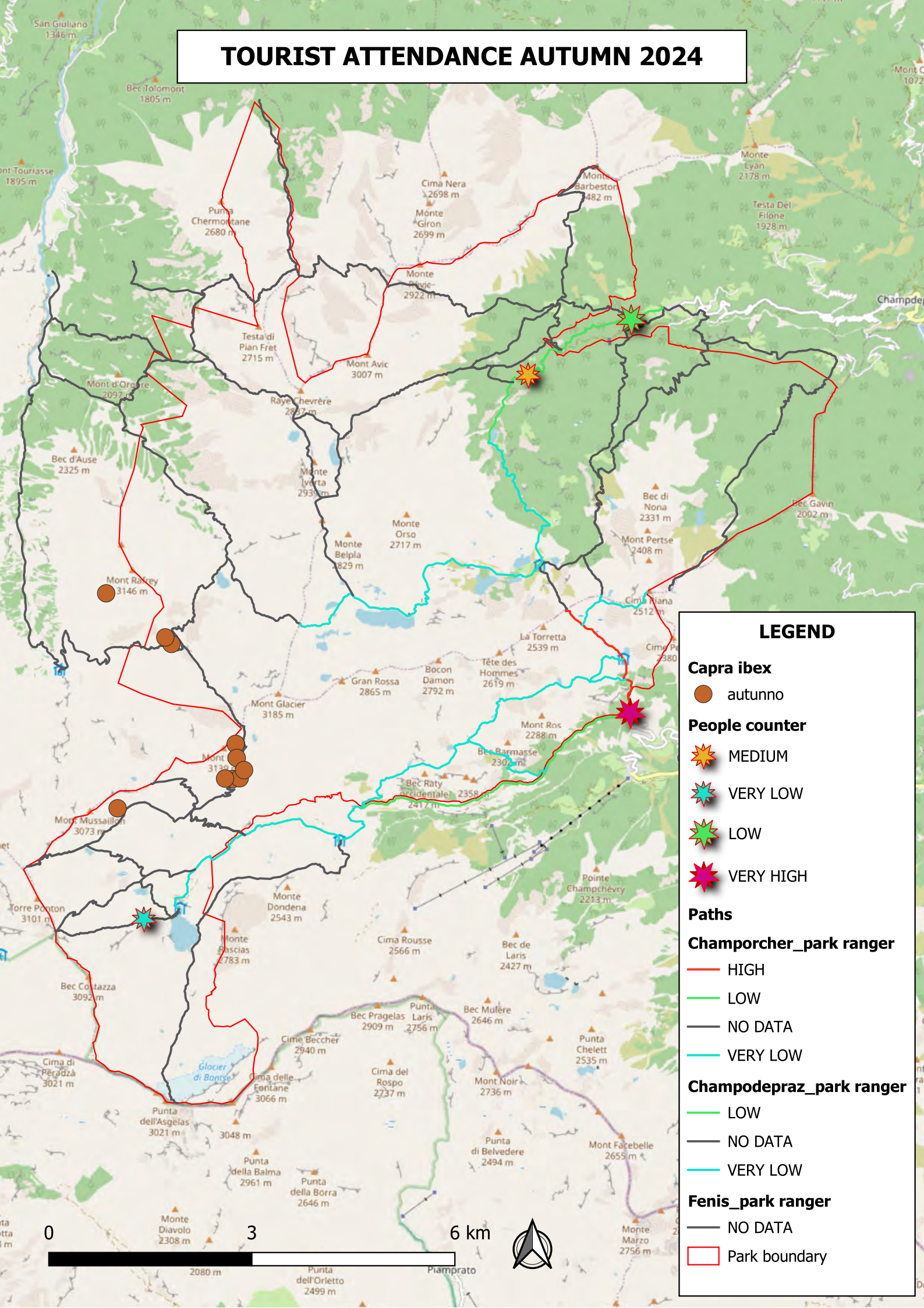
Champorcher_park ranger
 LOW
 MEDIUM
 NO DATA
 VERY HIGH
 VERY LOW

Fenis_park ranger
 NO DATA
 Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2024



LEGEND

Capra ibex

● autunno

People counter

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

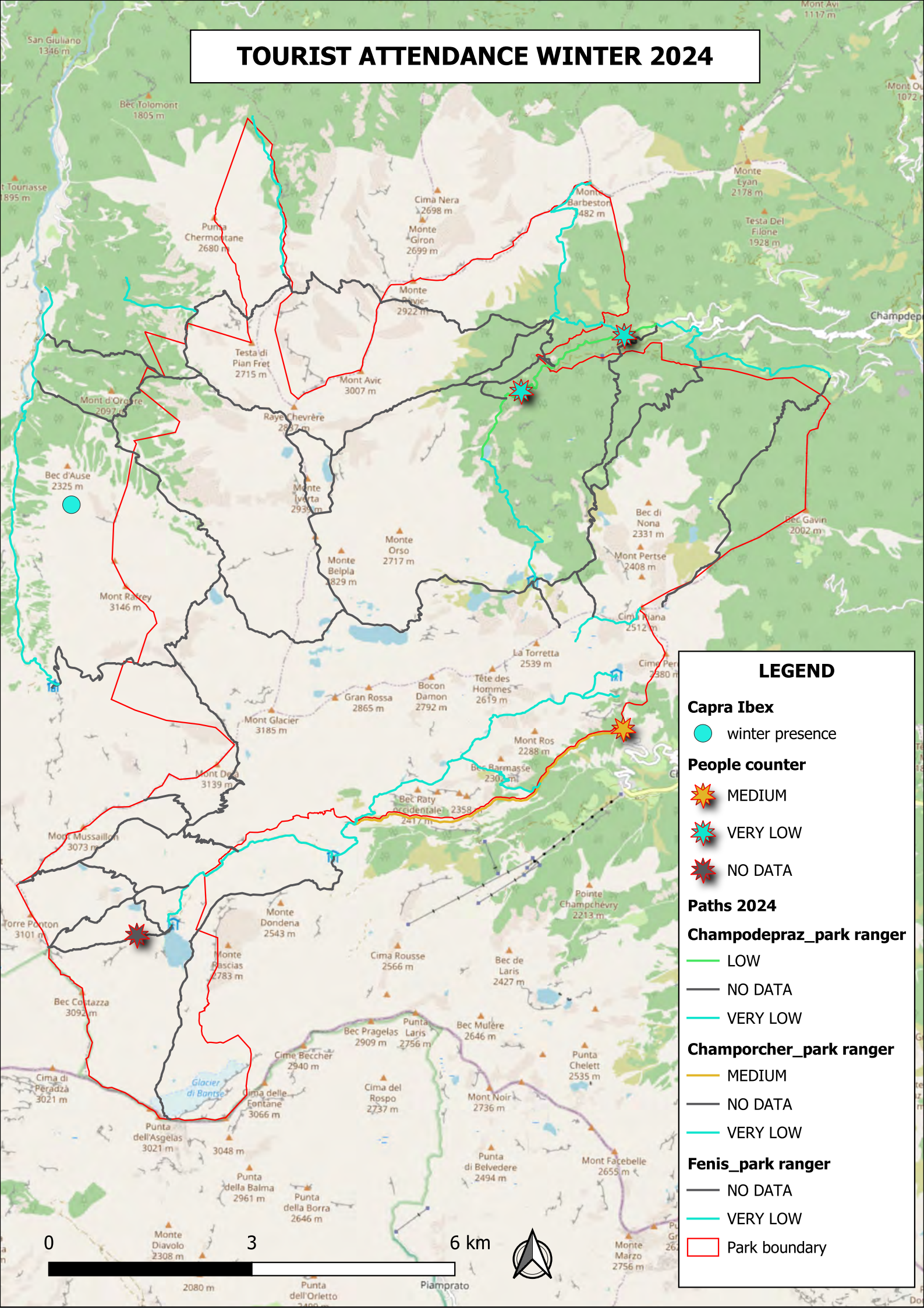
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamprato

TOURIST ATTENDANCE WINTER 2024

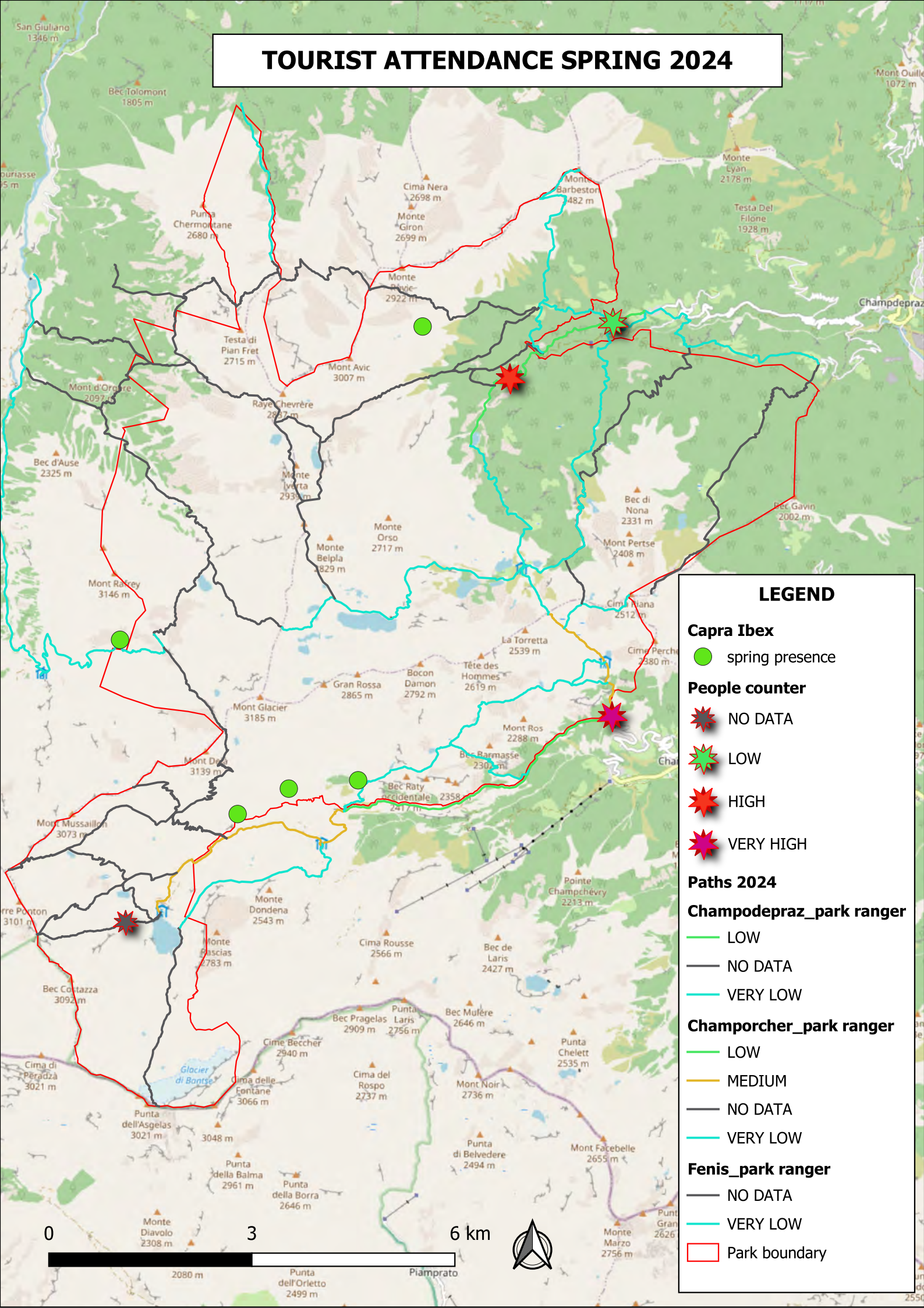


LEGEND

- Capra Ibex**
 - winter presence
- People counter**
 - MEDIUM
 - VERY LOW
 - NO DATA
- Paths 2024**
- Champodepraz_park ranger**
 - LOW
 - NO DATA
 - VERY LOW
- Champorcher_park ranger**
 - MEDIUM
 - NO DATA
 - VERY LOW
- Fenis_park ranger**
 - NO DATA
 - VERY LOW
 - Park boundary



TOURIST ATTENDANCE SPRING 2024



LEGEND

Capra Ibex

● spring presence

People counter

★ NO DATA

★ LOW

★ HIGH

★ VERY HIGH

Paths 2024

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

— VERY LOW

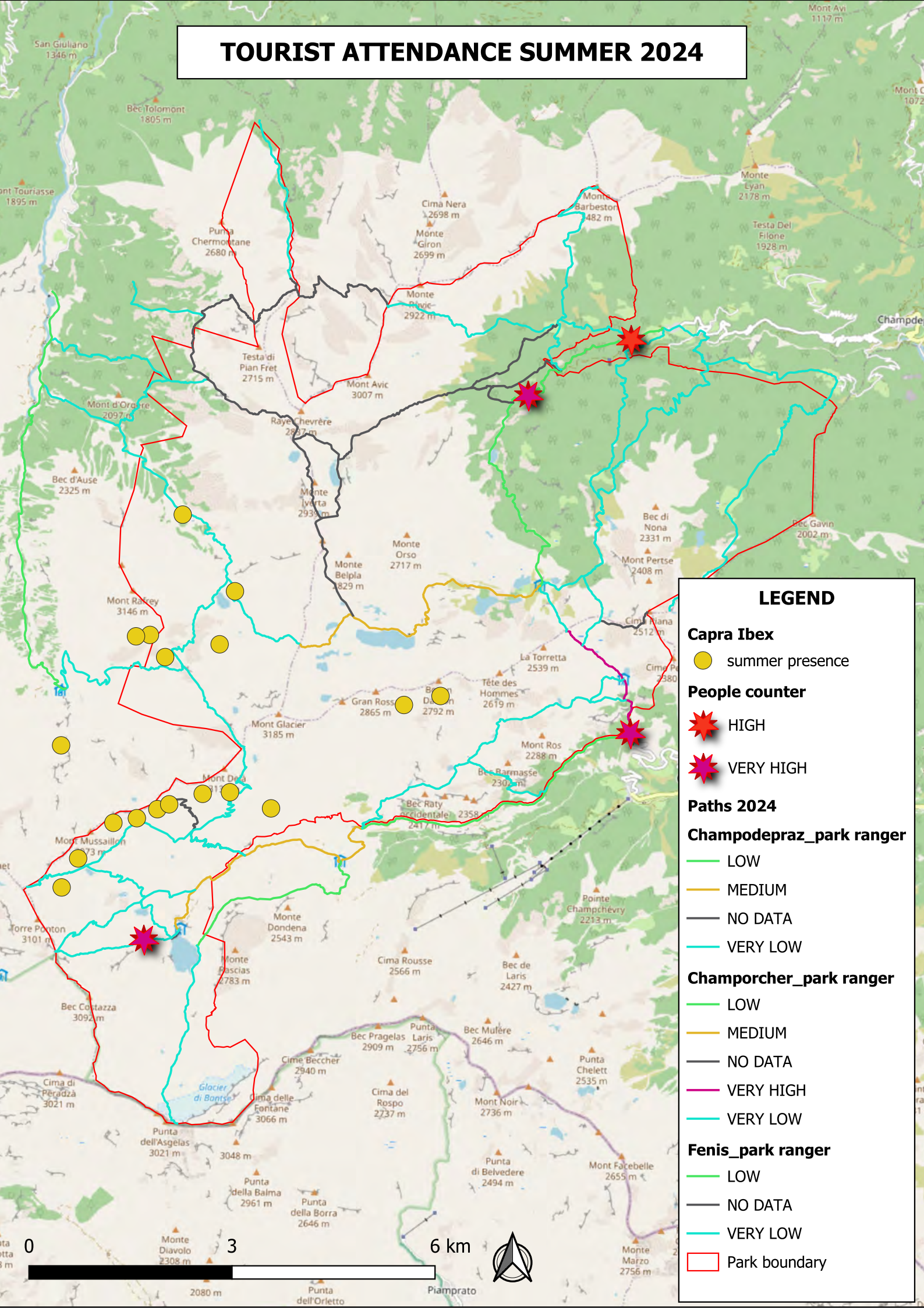
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2024



LEGEND

Capra Ibex

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths 2024

Champdepraz_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE AUTUMN 2024



LEGEND

Capra Ibex

- autumn presence

People counter

- ★ MEDIUM
- ★ VERY LOW

Paths 2024

Champdepraz_park ranger

- LOW
- NO DATA
- VERY LOW

Champorcher_park ranger

- HIGH
- LOW
- NO DATA
- VERY LOW

Fenis_park ranger

- LOW
- NO DATA
- VERY LOW
- Park boundary

0 3 6 km

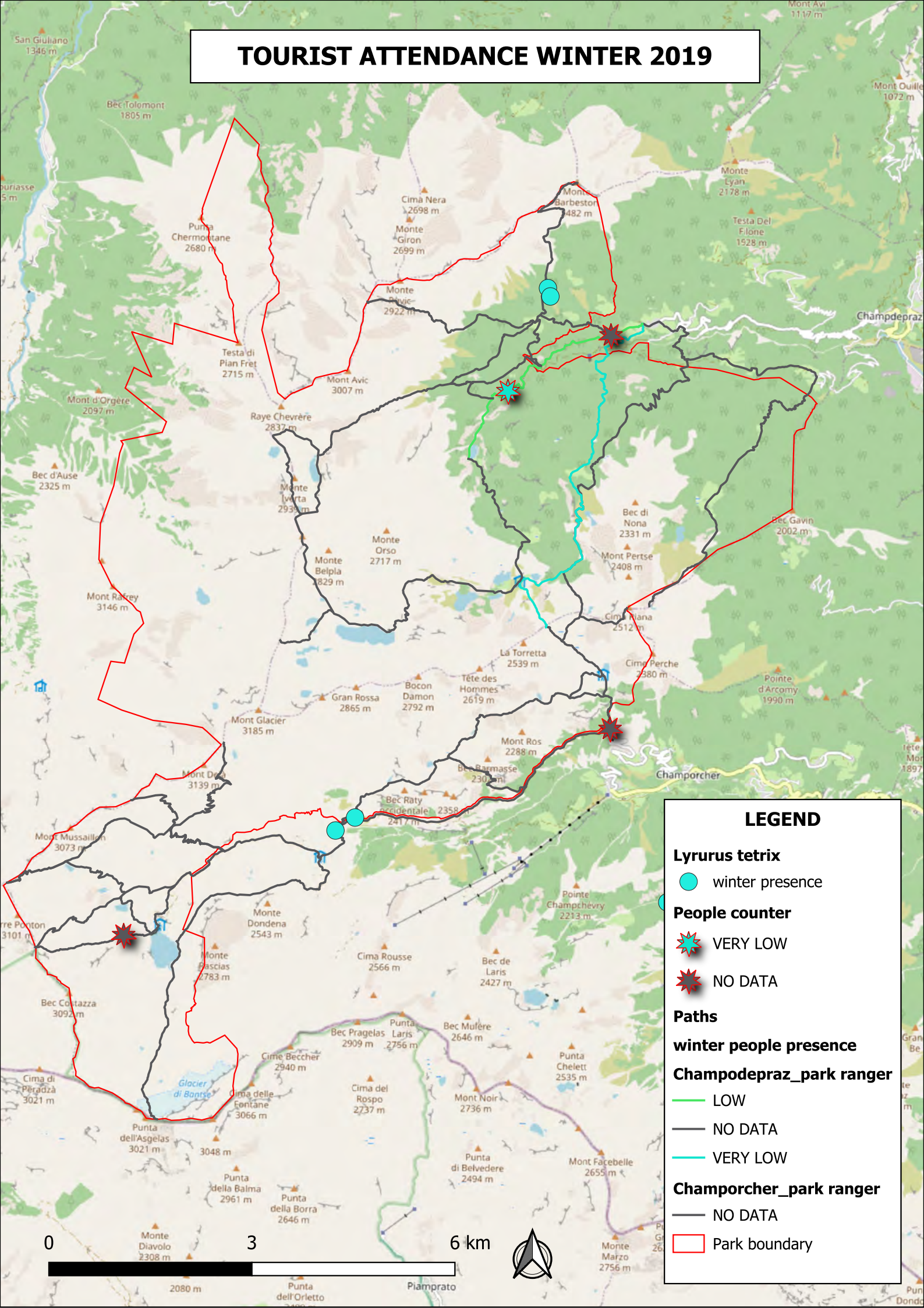


2080 m Punta dell'Orletto 2499 m Piamptrato

Annex 4 – Study Case PNMA

Disturbance from Tourists: Black Grouse

TOURIST ATTENDANCE WINTER 2019



LEGEND

Lyrurus tetrix

● winter presence

People counter

★ VERY LOW

★ NO DATA

Paths

winter people presence

Champdepraz_park ranger

— LOW

— NO DATA

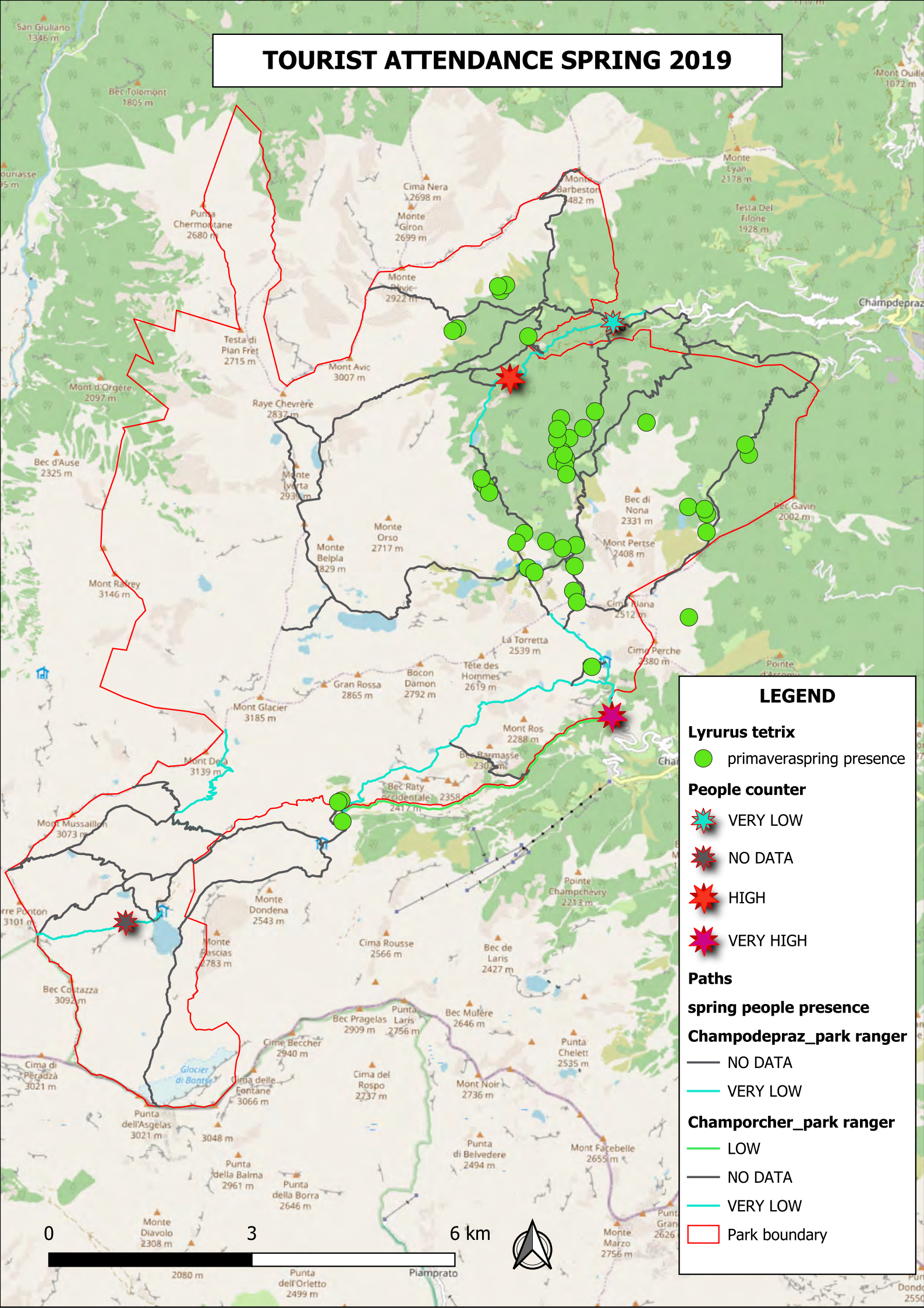
— VERY LOW

Champorcher_park ranger

— NO DATA

□ Park boundary

TOURIST ATTENDANCE SPRING 2019



LEGEND

Lyrurus tetrix

● primaveraspring presence

People counter

★ VERY LOW

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

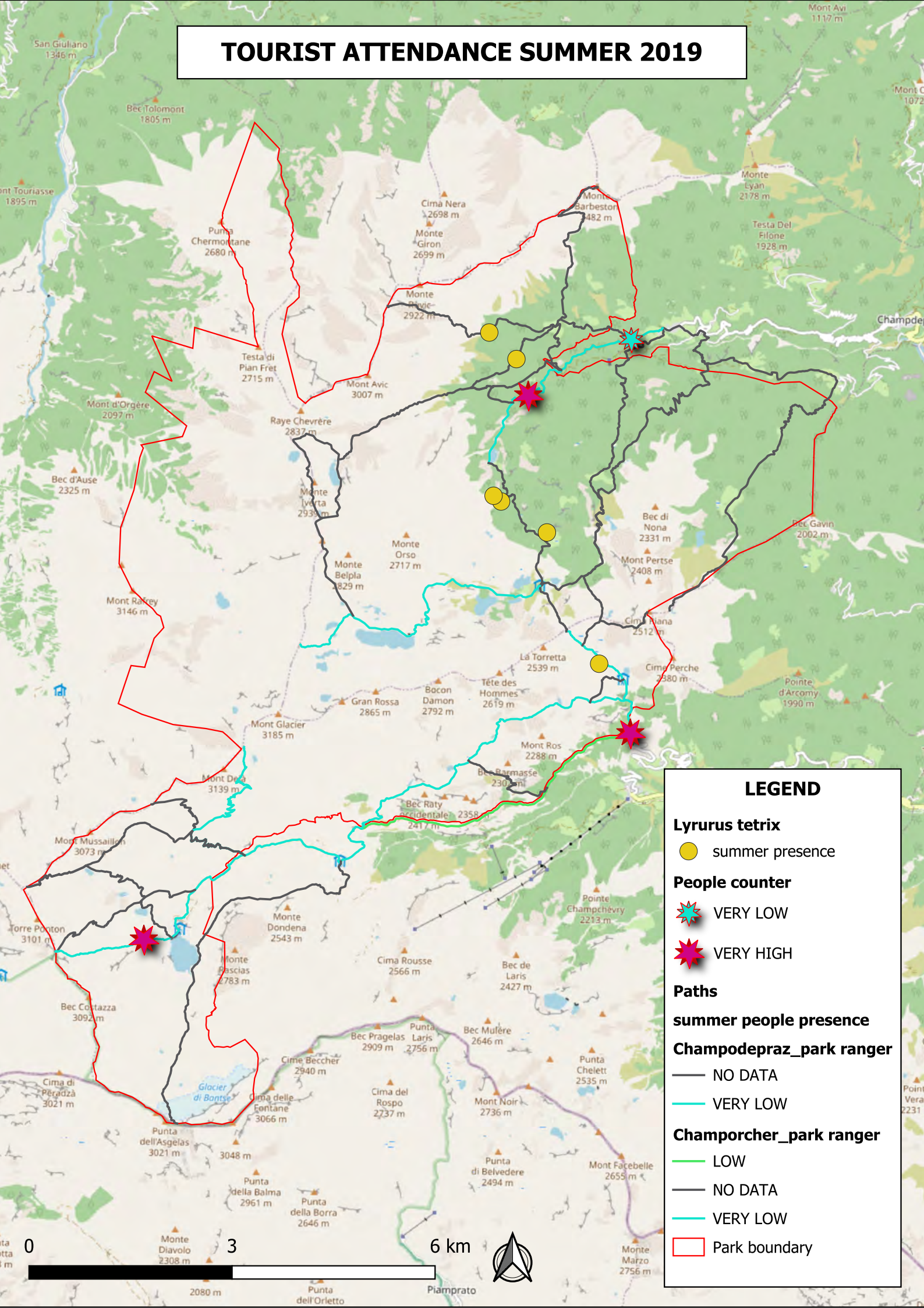
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2019



LEGEND

Lyrurus tetrix
 ● summer presence

People counter
 ✨ VERY LOW
 ✨ VERY HIGH

Paths
summer people presence
Champdepraz_park ranger
 — NO DATA
 — VERY LOW

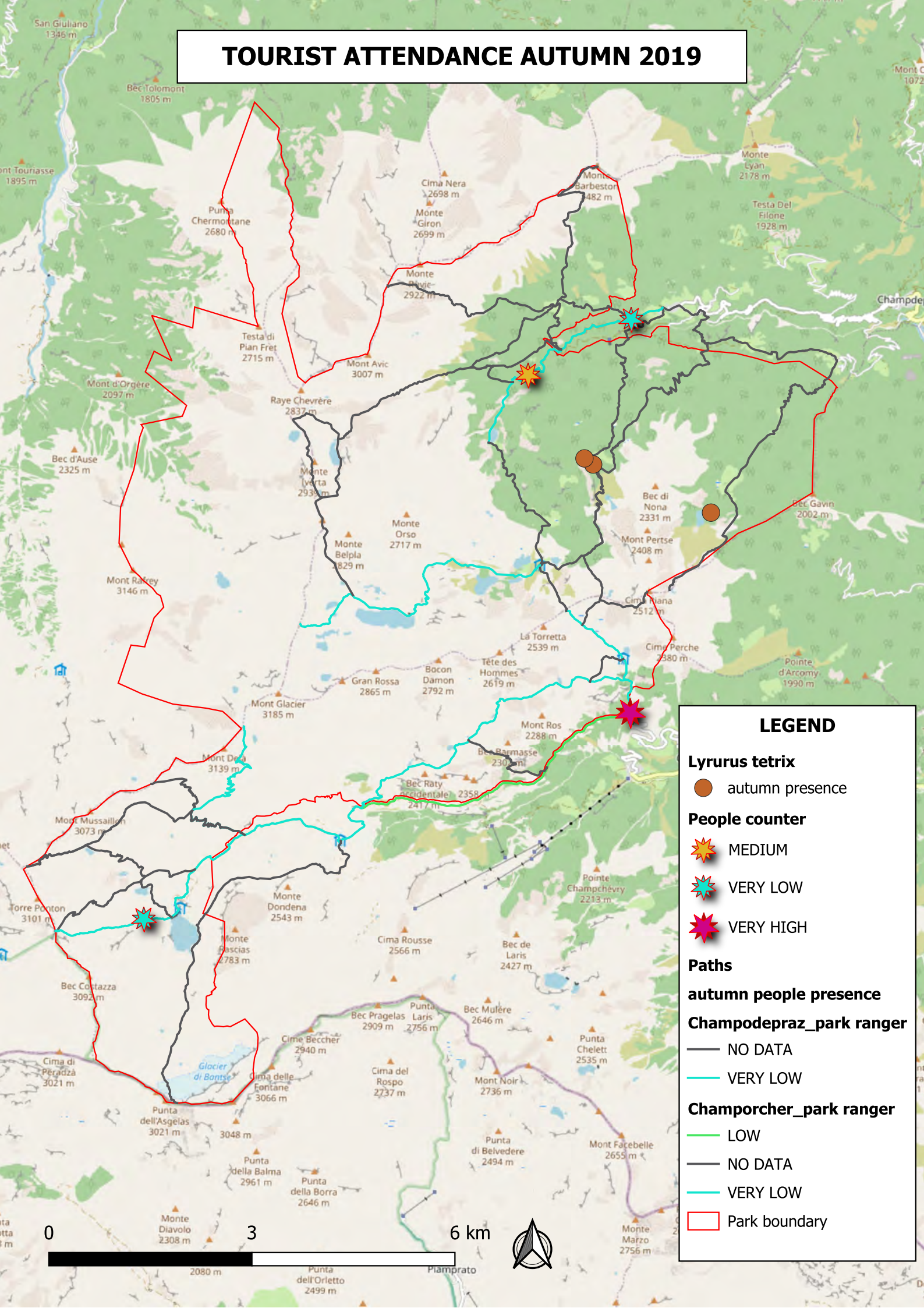
Champorcher_park ranger
 — LOW
 — NO DATA
 — VERY LOW
 □ Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE AUTUMN 2019



LEGEND

Lyrurus tetrix

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ VERY HIGH

Paths

autumn people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

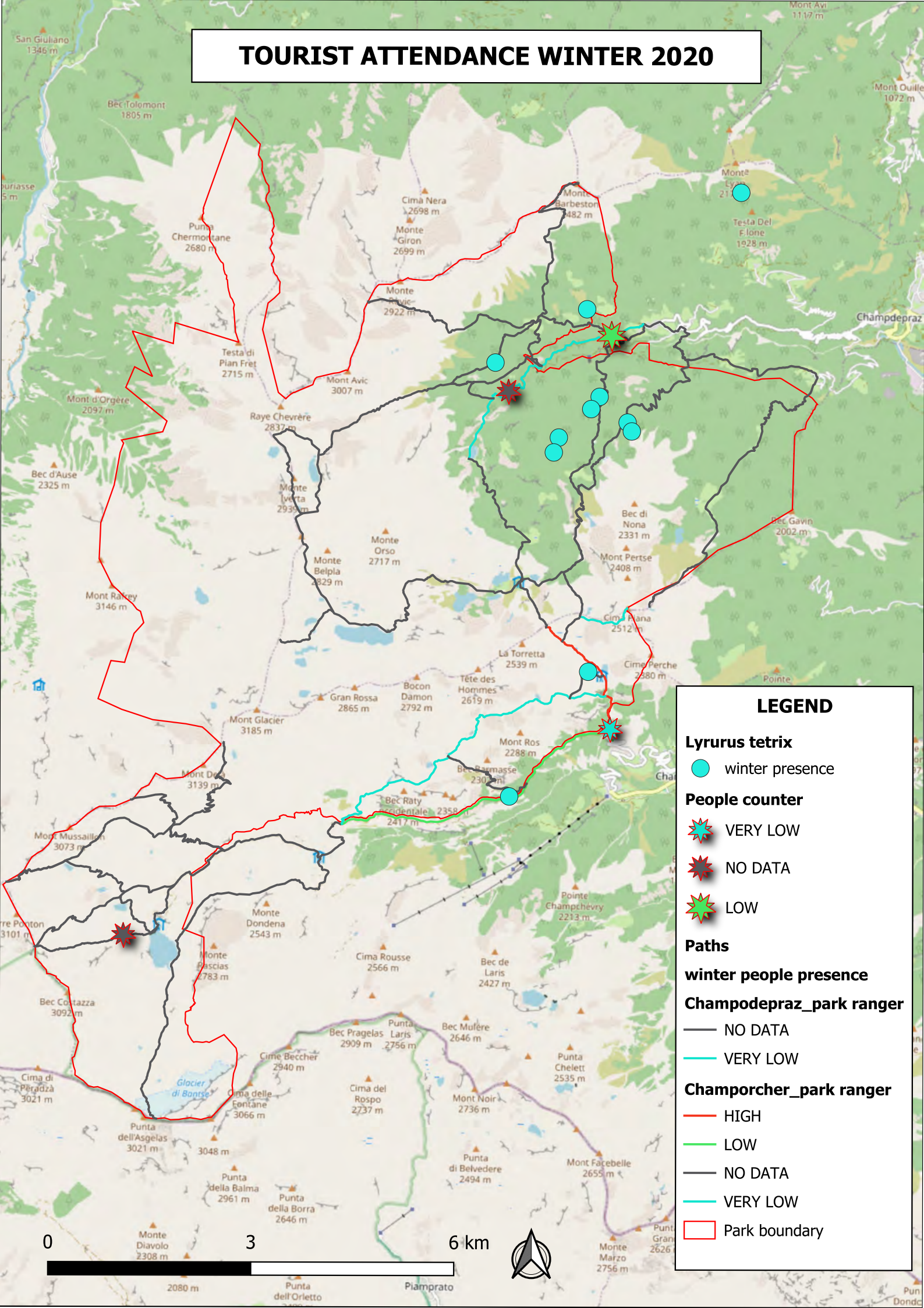
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2020




LEGEND

Lyrurus tetrix

 winter presence

People counter

 VERY LOW


 NO DATA

 LOW

Paths

winter people presence

Champdepraz_park ranger

 NO DATA

 VERY LOW


Champorcher_park ranger

 HIGH

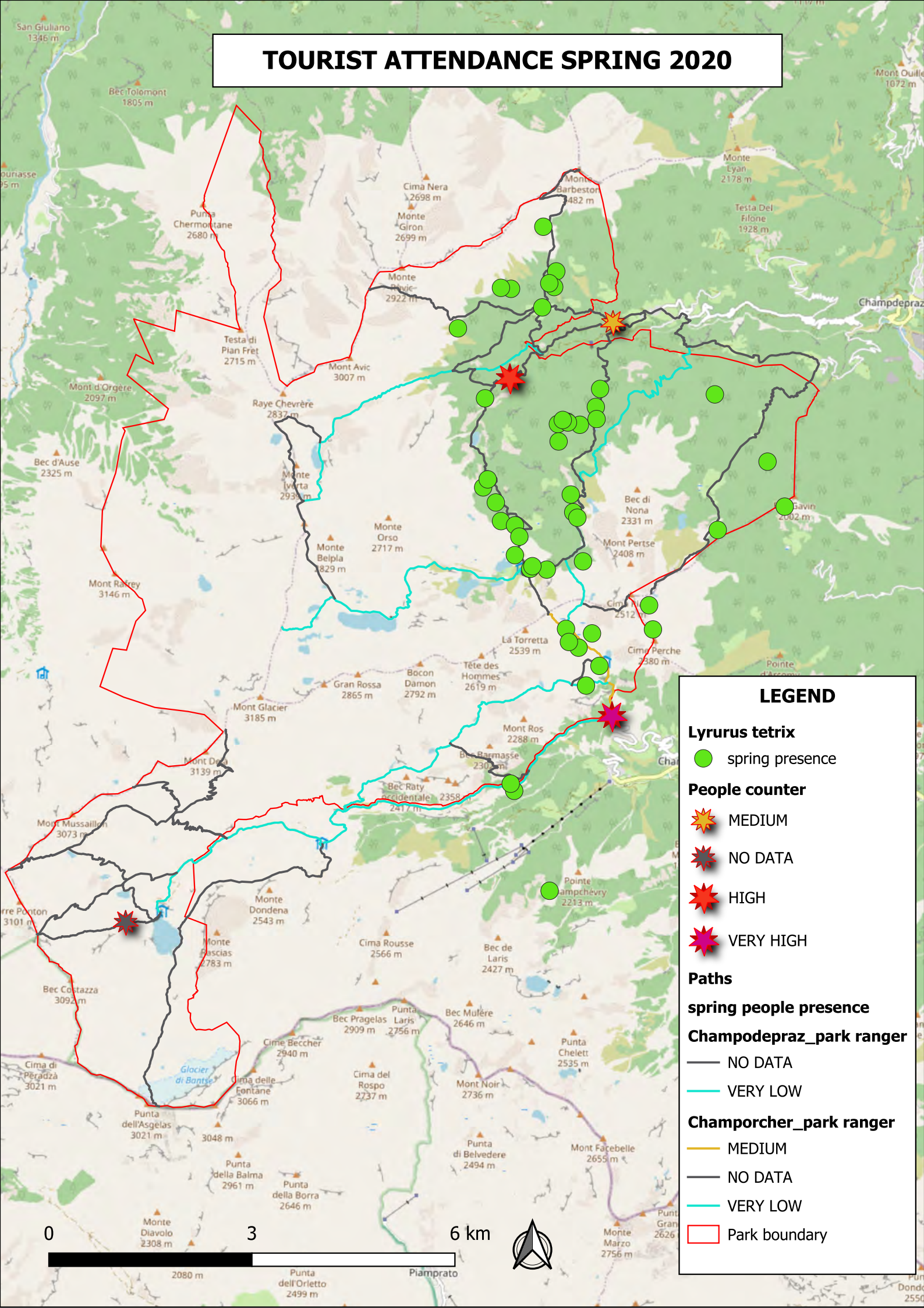
 LOW

 NO DATA

 VERY LOW

 Park boundary

TOURIST ATTENDANCE SPRING 2020



LEGEND

Lyrurus tetrix

● spring presence

People counter

★ MEDIUM

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— MEDIUM

— NO DATA

— VERY LOW

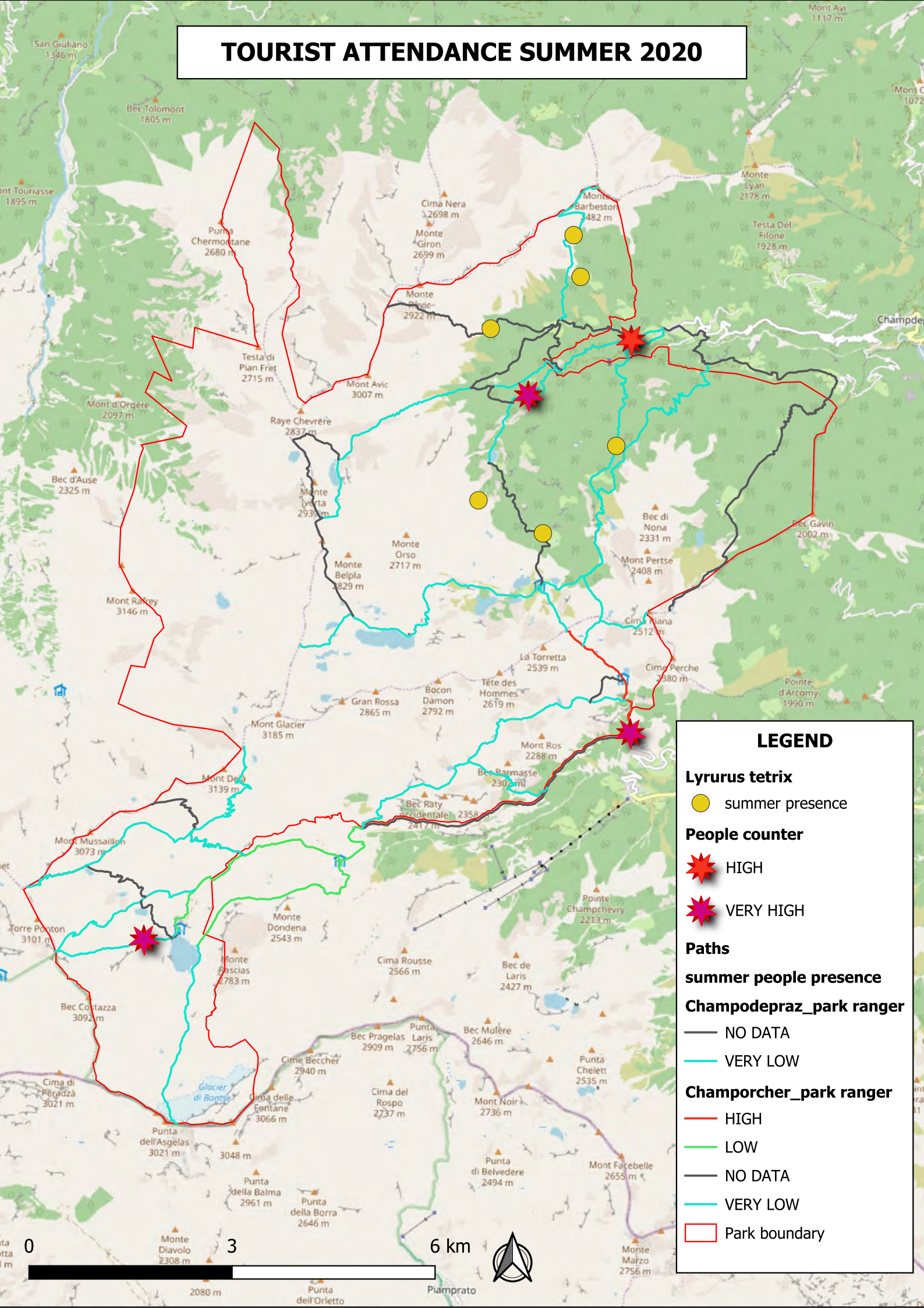
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2020



LEGEND

Lyrurus tetrix

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champodepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

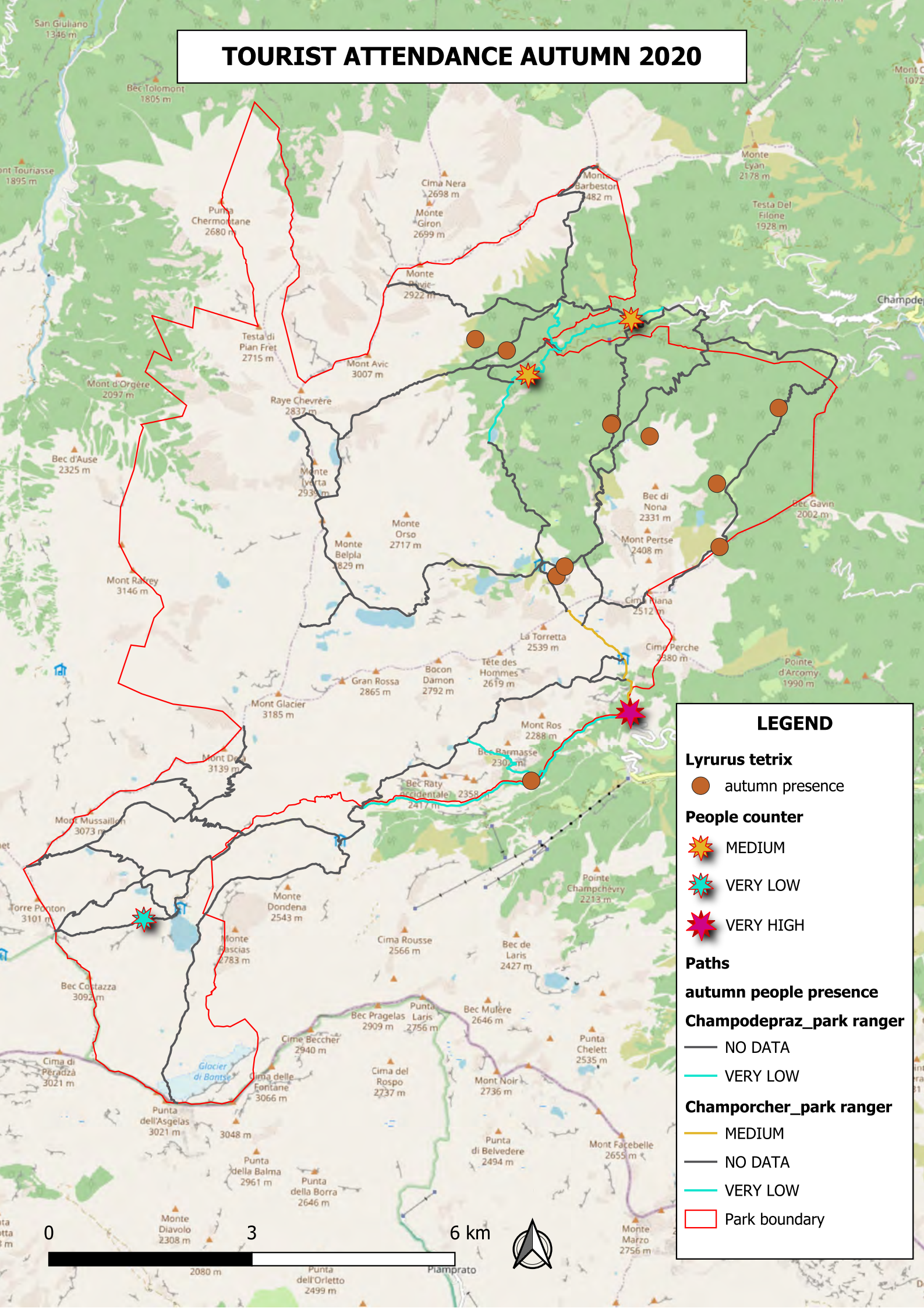
— VERY LOW

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2020



LEGEND

Lyrurus tetrix

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ VERY HIGH

Paths

autumn people presence

Champodepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

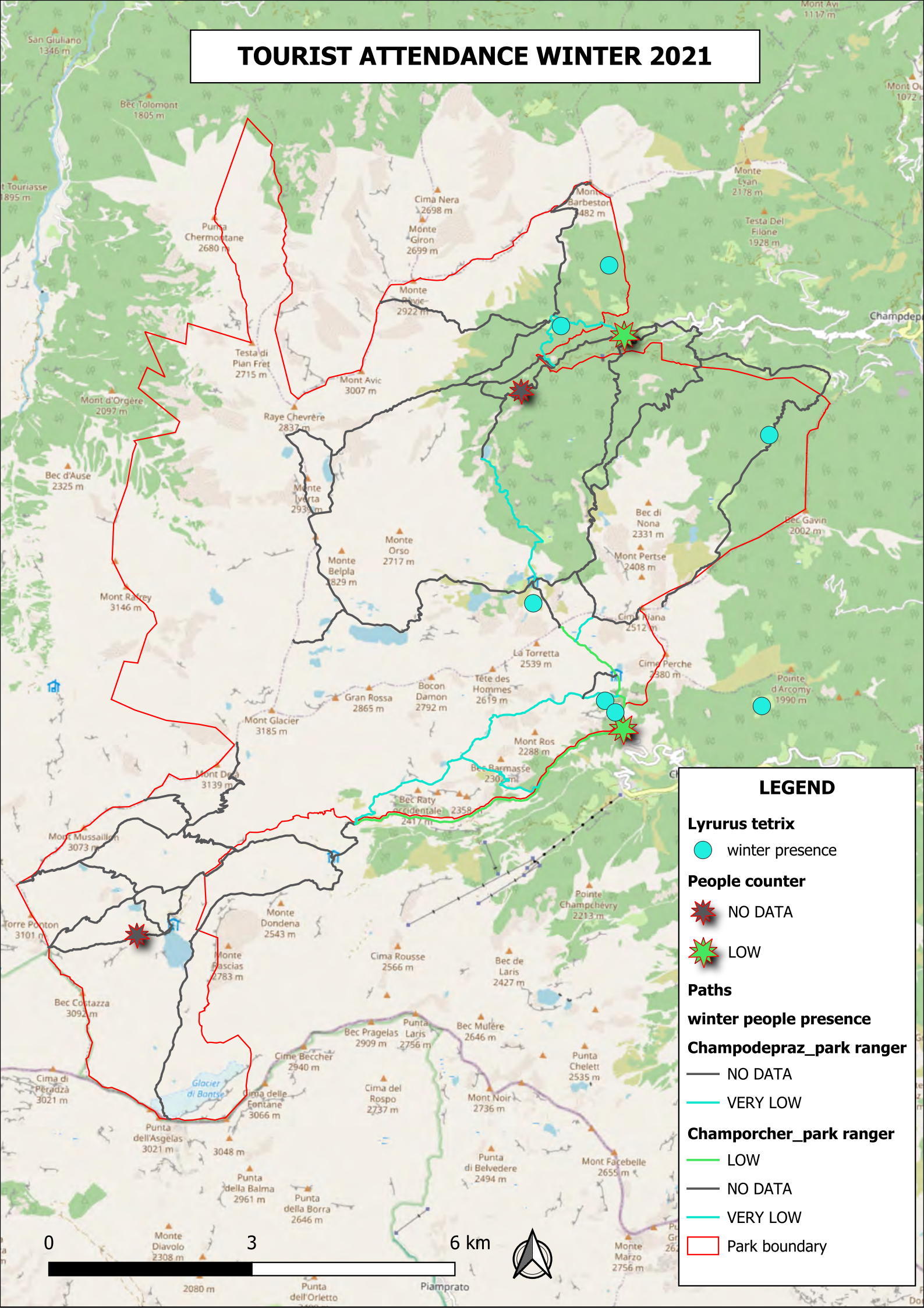
— MEDIUM

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE WINTER 2021



LEGEND

Lyrurus tetrix

- winter presence

People counter

- NO DATA
- LOW

Paths

winter people presence

Champdepraz_park ranger

- NO DATA
- VERY LOW

Champorcher_park ranger

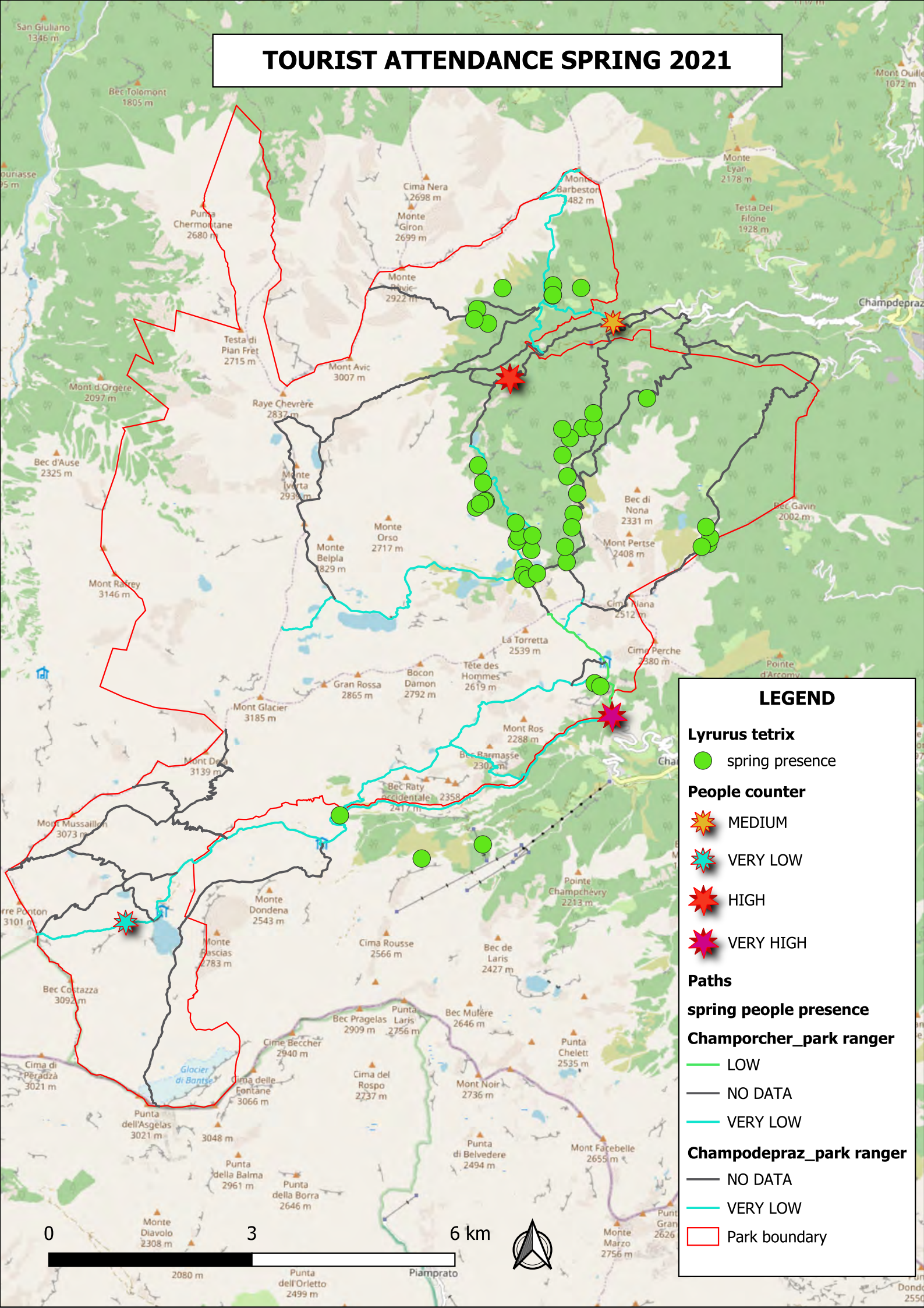
- LOW
- NO DATA
- VERY LOW

- Park boundary

0 3 6 km



TOURIST ATTENDANCE SPRING 2021



LEGEND

Lyrurus tetrix

● spring presence

People counter

★ MEDIUM

★ VERY LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

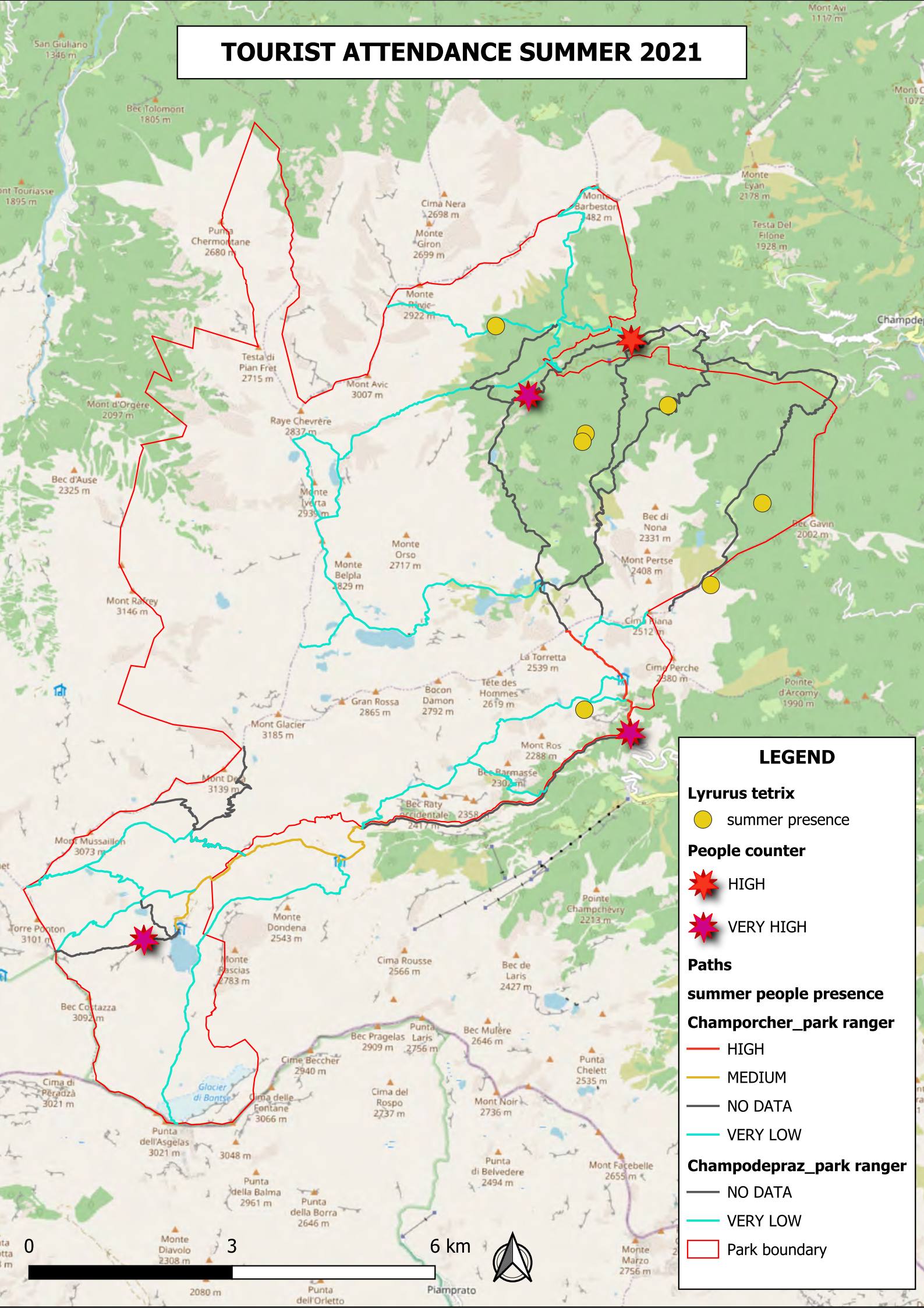
Champodepraz_park ranger

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE SUMMER 2021



LEGEND

Lyrurus tetrix

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champorcher_park ranger

— HIGH

— MEDIUM

— NO DATA

— VERY LOW

Champodepraz_park ranger

— NO DATA

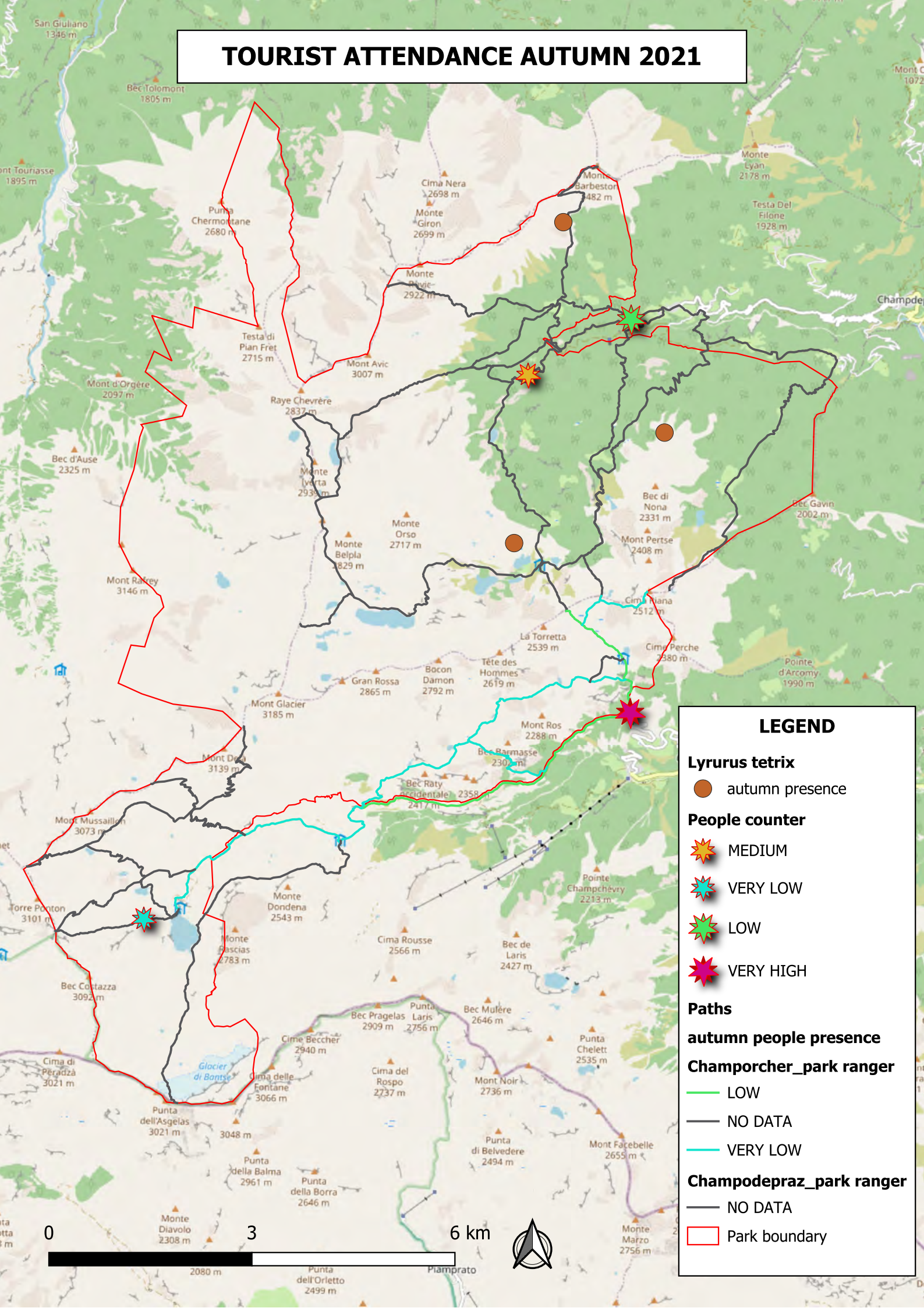
— VERY LOW

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2021



LEGEND

Lyrurus tetrix

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths

autumn people presence

Champorcher_park ranger

— LOW

— NO DATA

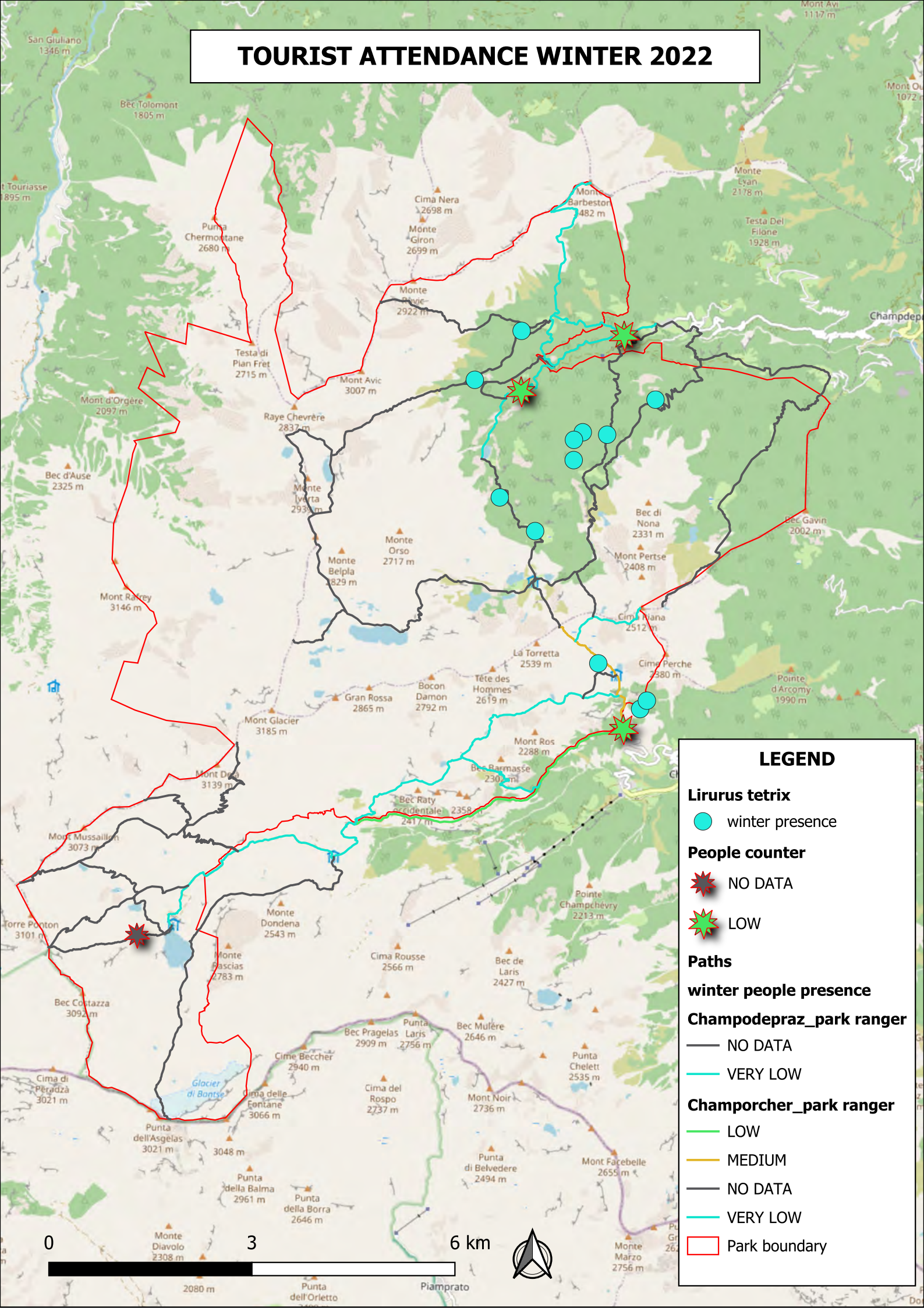
— VERY LOW

Champodepraz_park ranger

— NO DATA

□ Park boundary

TOURIST ATTENDANCE WINTER 2022



LEGEND

Lirurus tetrix

● winter presence

People counter

★ NO DATA

★ LOW

Paths

winter people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

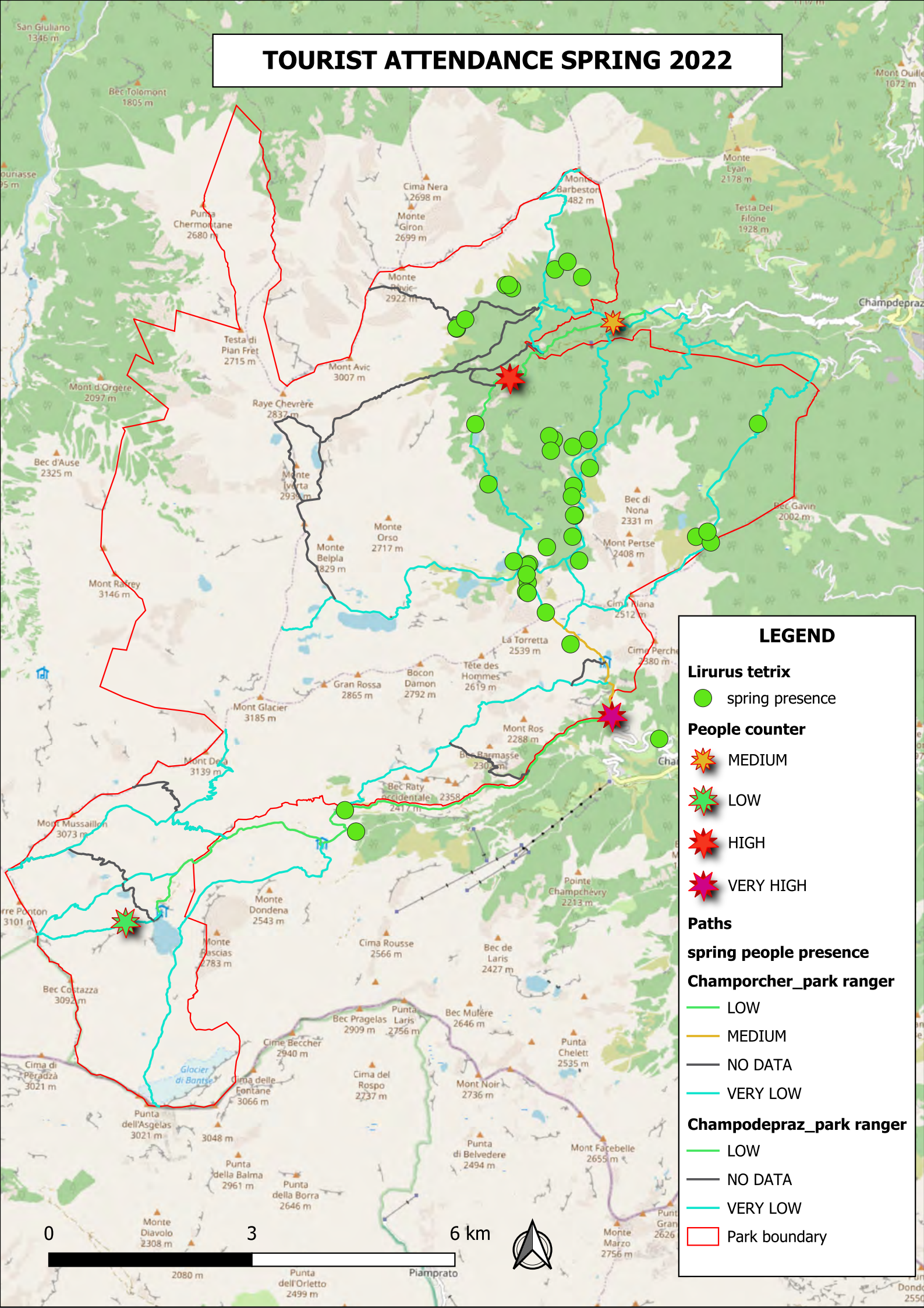
— MEDIUM

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE SPRING 2022



LEGEND

Lirurus tetrix

● spring presence

People counter

★ MEDIUM

★ LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

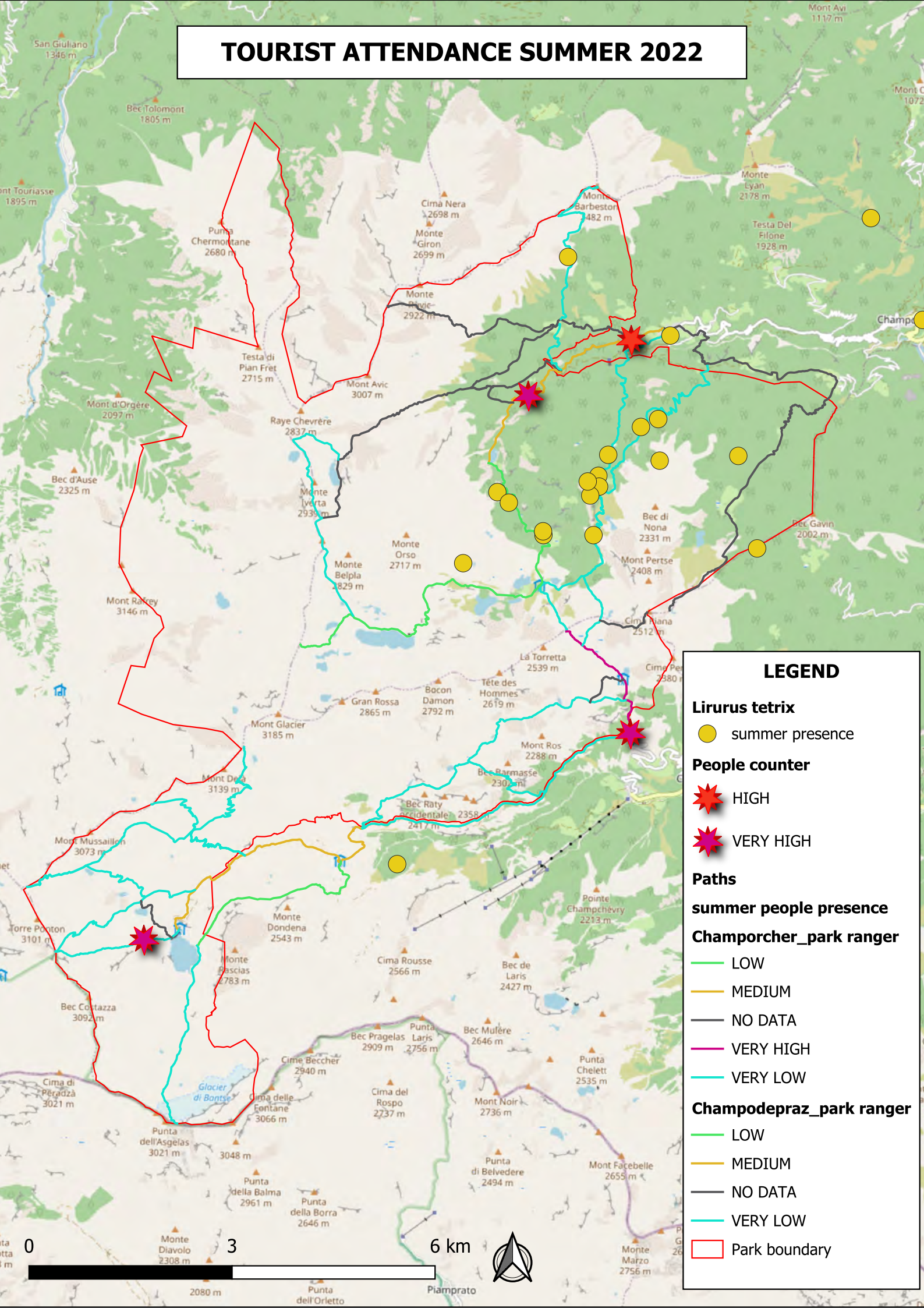
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2022



LEGEND

Lirurus tetrrix

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Champodepraz_park ranger

— LOW

— MEDIUM

— NO DATA

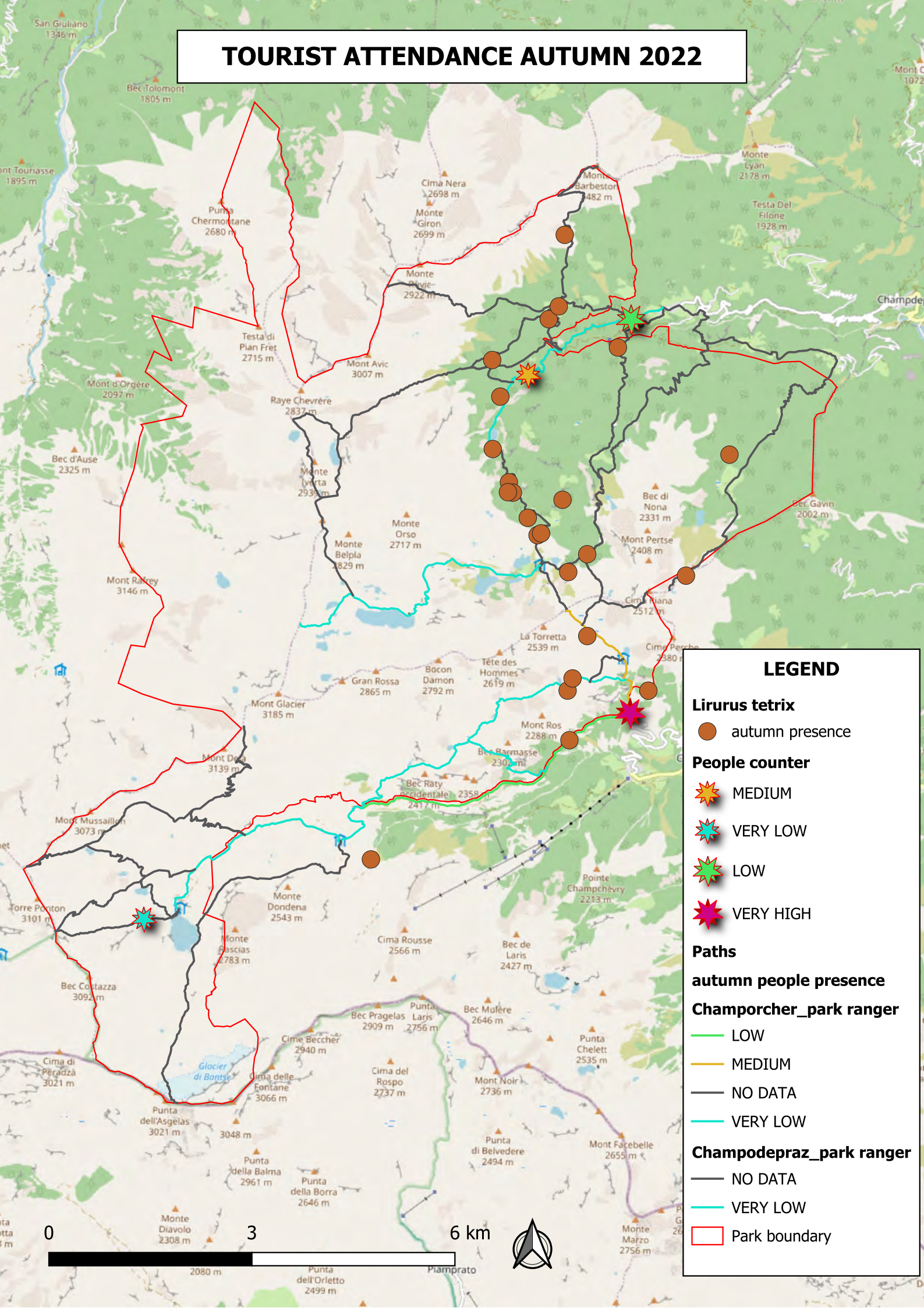
— VERY LOW

□ Park boundary

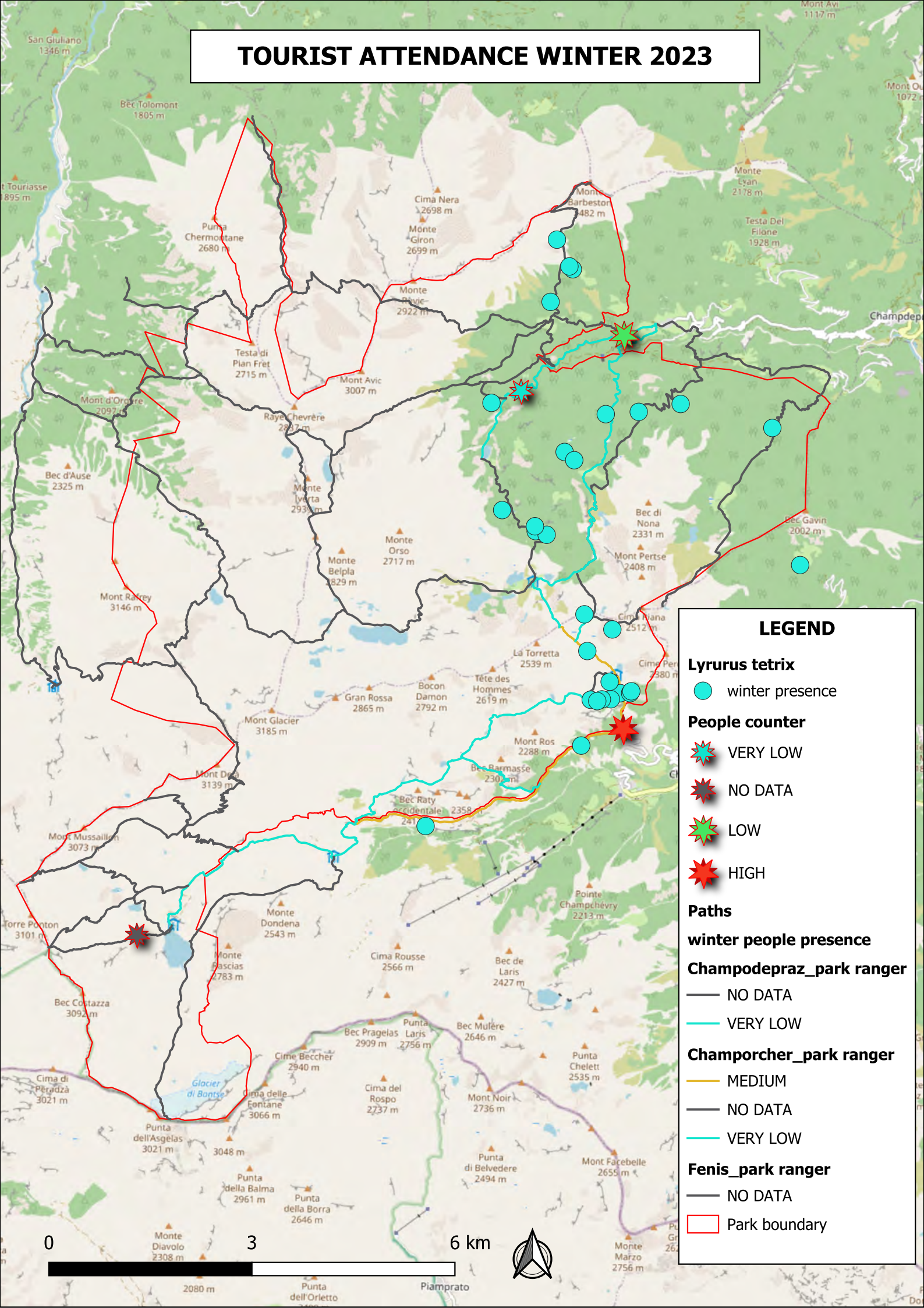
0 3 6 km



TOURIST ATTENDANCE AUTUMN 2022



TOURIST ATTENDANCE WINTER 2023



LEGEND

Lyrurus tetrix

● winter presence

People counter

★ VERY LOW

★ NO DATA

★ LOW

★ HIGH

Paths

winter people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

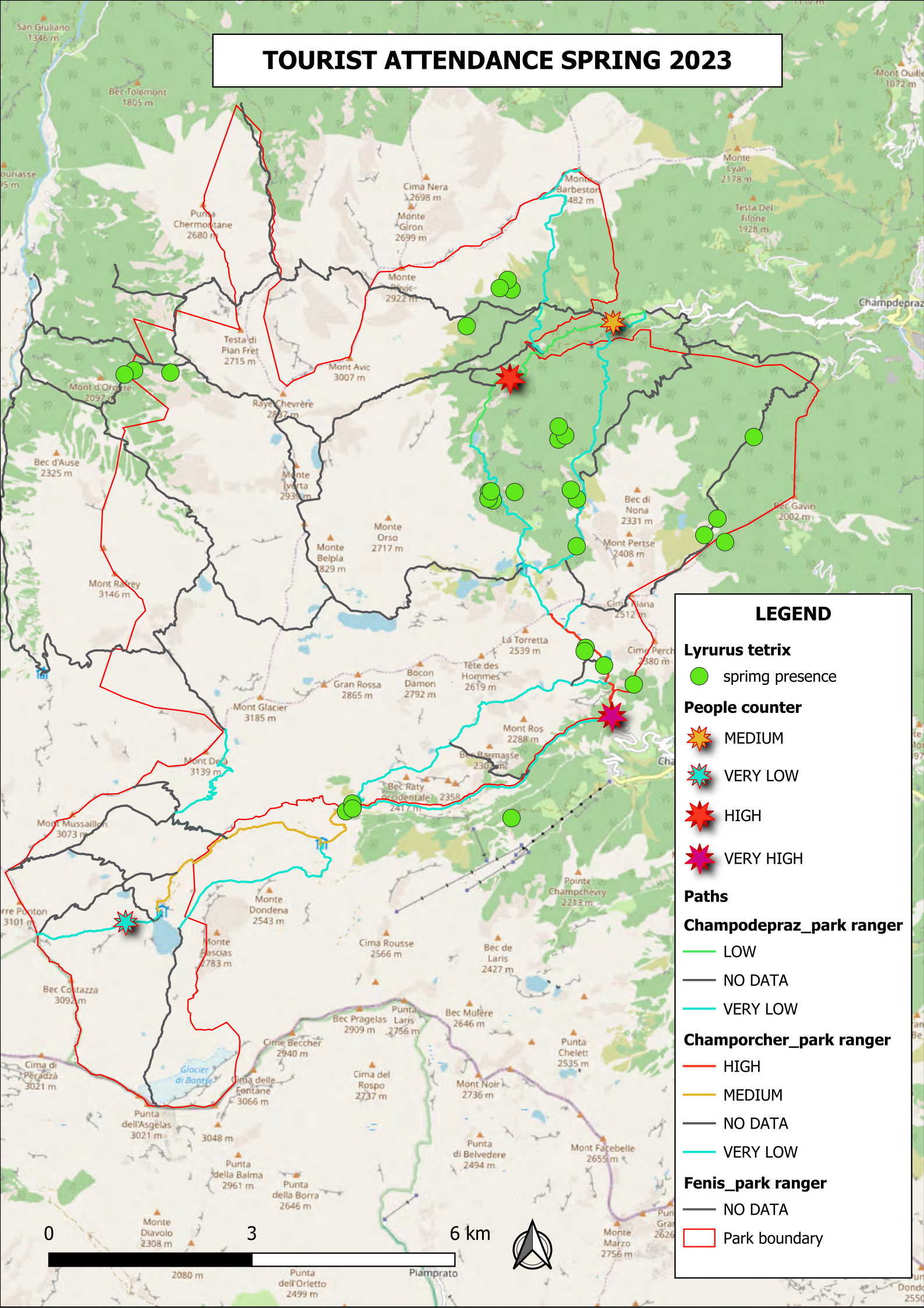
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE SPRING 2023



LEGEND

Lyrurus tetrix

● spring presence

People counter

★ MEDIUM

★ VERY LOW

★ HIGH

★ VERY HIGH

Paths

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

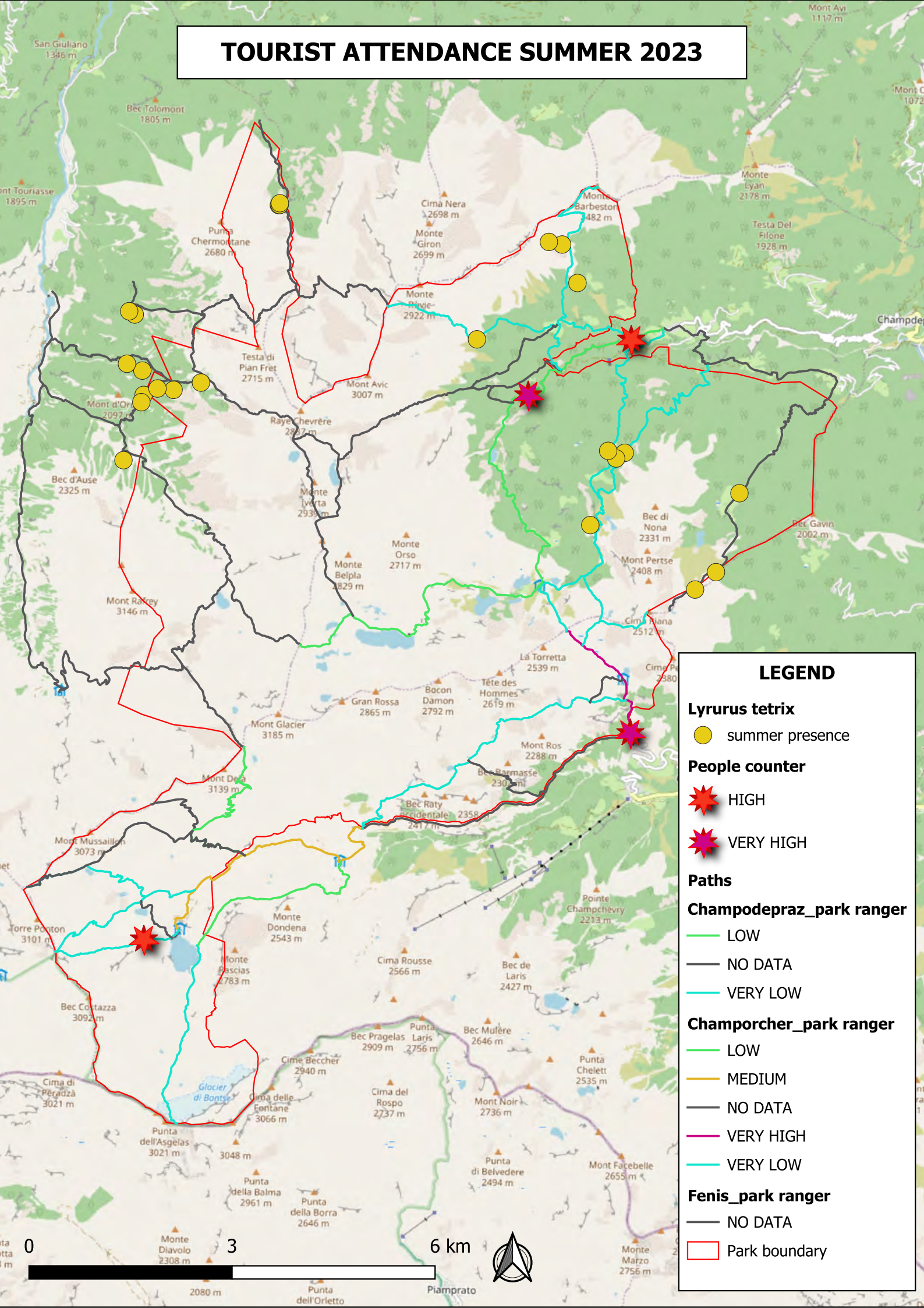
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2023



LEGEND

Lyrurus tetrix

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

— NO DATA

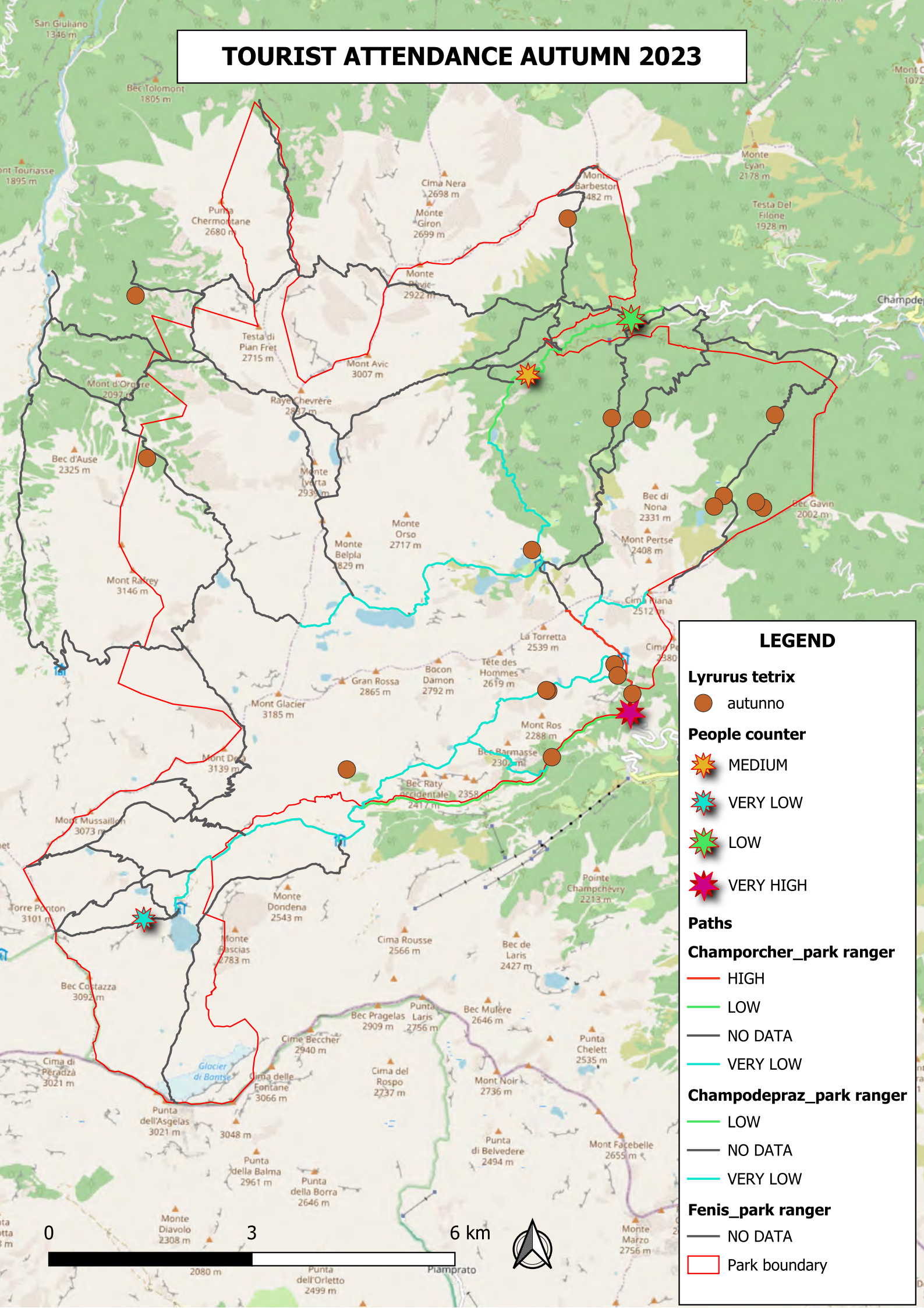
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE AUTUMN 2023



LEGEND

Lyrurus tetrix

● autunno

People counter

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

Champodepraz_park ranger

— LOW

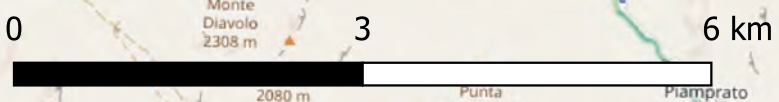
— NO DATA

— VERY LOW

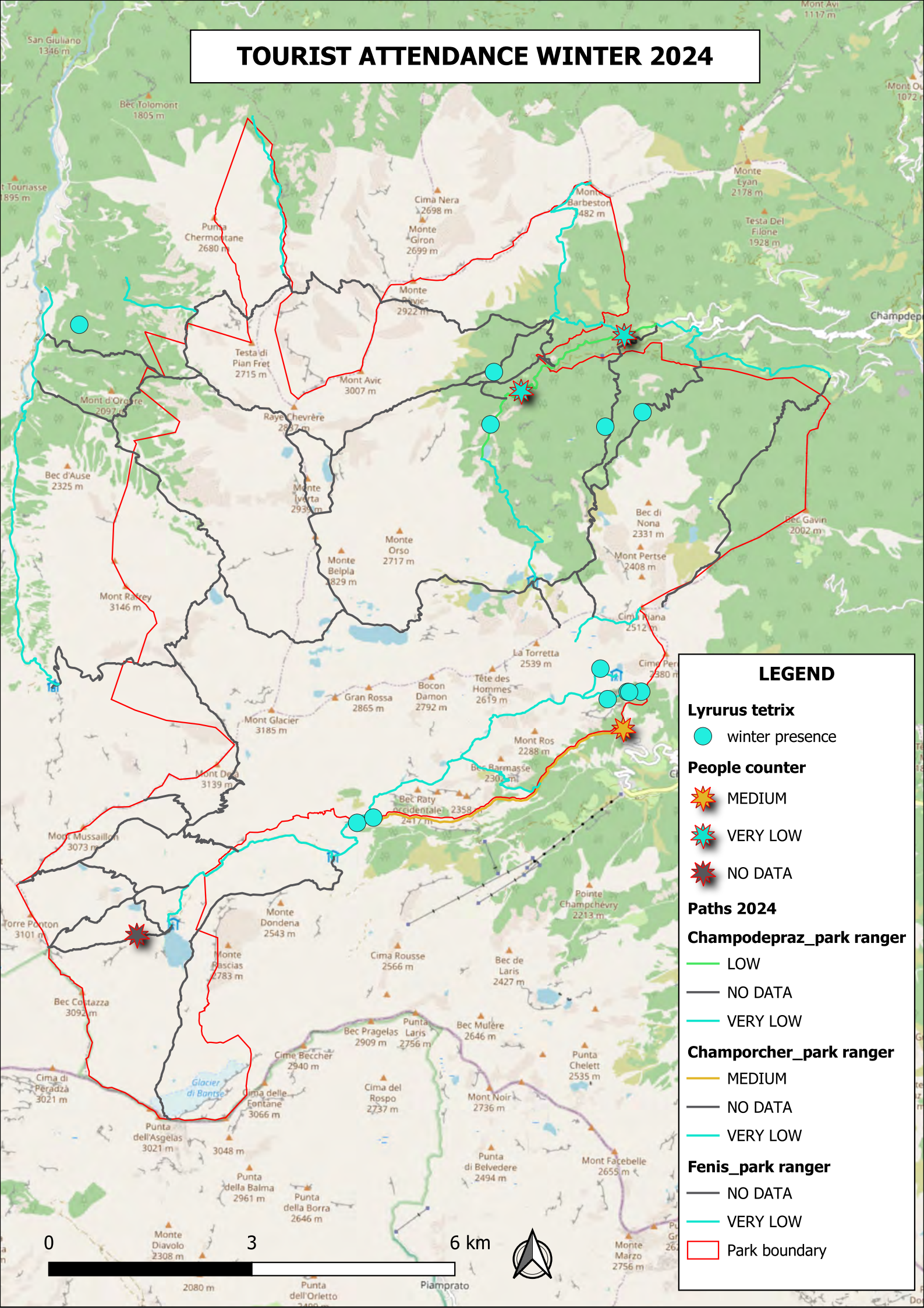
Fenis_park ranger

— NO DATA

□ Park boundary



TOURIST ATTENDANCE WINTER 2024



LEGEND

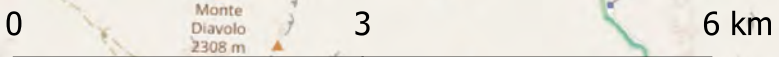
Lyrurus tetrix
 ● winter presence

People counter
 ★ MEDIUM
 ★ VERY LOW
 ★ NO DATA

Paths 2024
Champdepraz_park ranger
 — LOW
 — NO DATA
 — VERY LOW

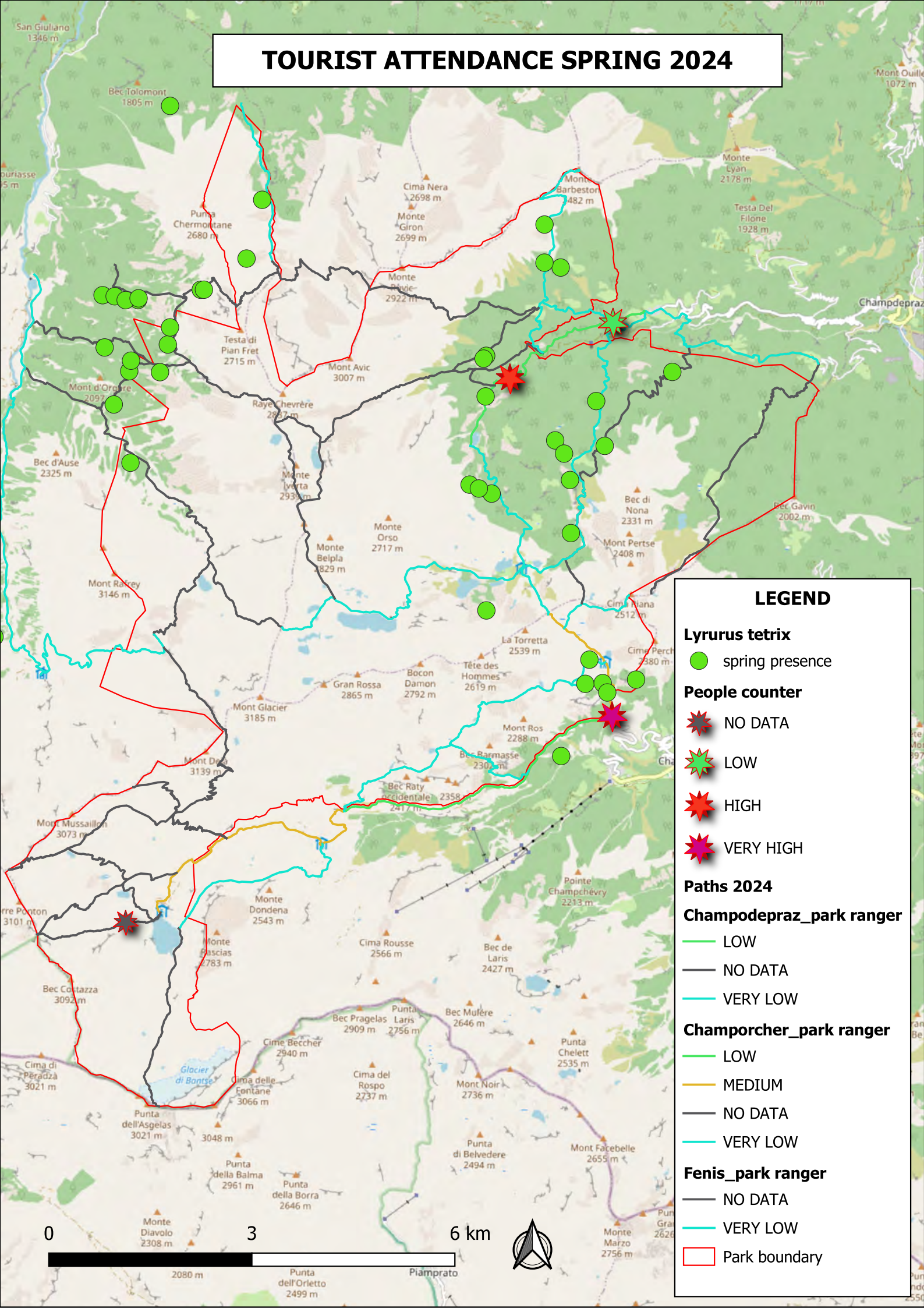
Champorcher_park ranger
 — MEDIUM
 — NO DATA
 — VERY LOW

Fenis_park ranger
 — NO DATA
 — VERY LOW
 □ Park boundary



2080 m Punta dell'Orletto 2480 m Piamptrato

TOURIST ATTENDANCE SPRING 2024



LEGEND

Lyrurus tetrix

● spring presence

People counter

★ NO DATA

★ LOW

★ HIGH

★ VERY HIGH

Paths 2024

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

— VERY LOW

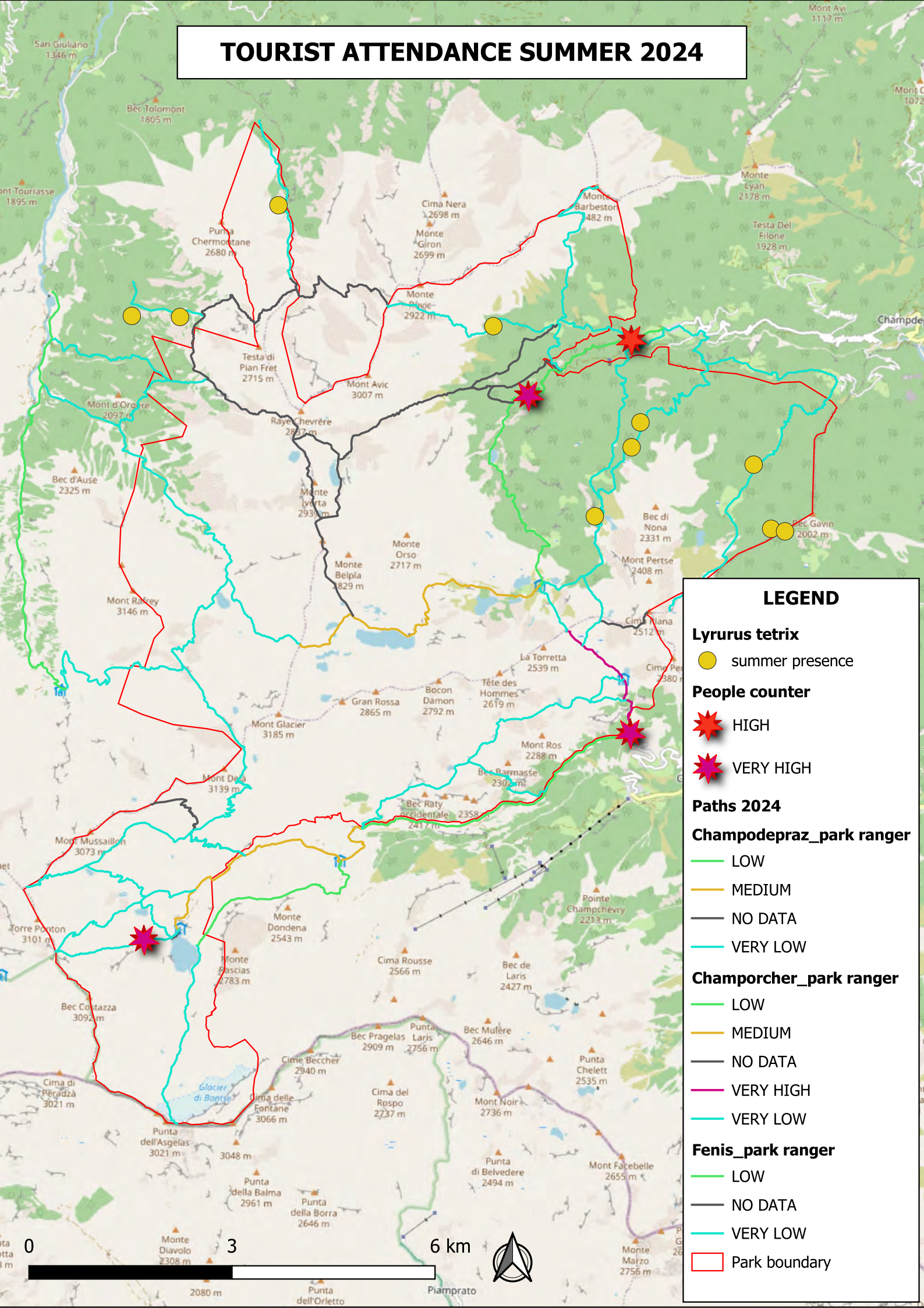
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2024



LEGEND

Lyrurus tetrix

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths 2024

Champodepraz_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

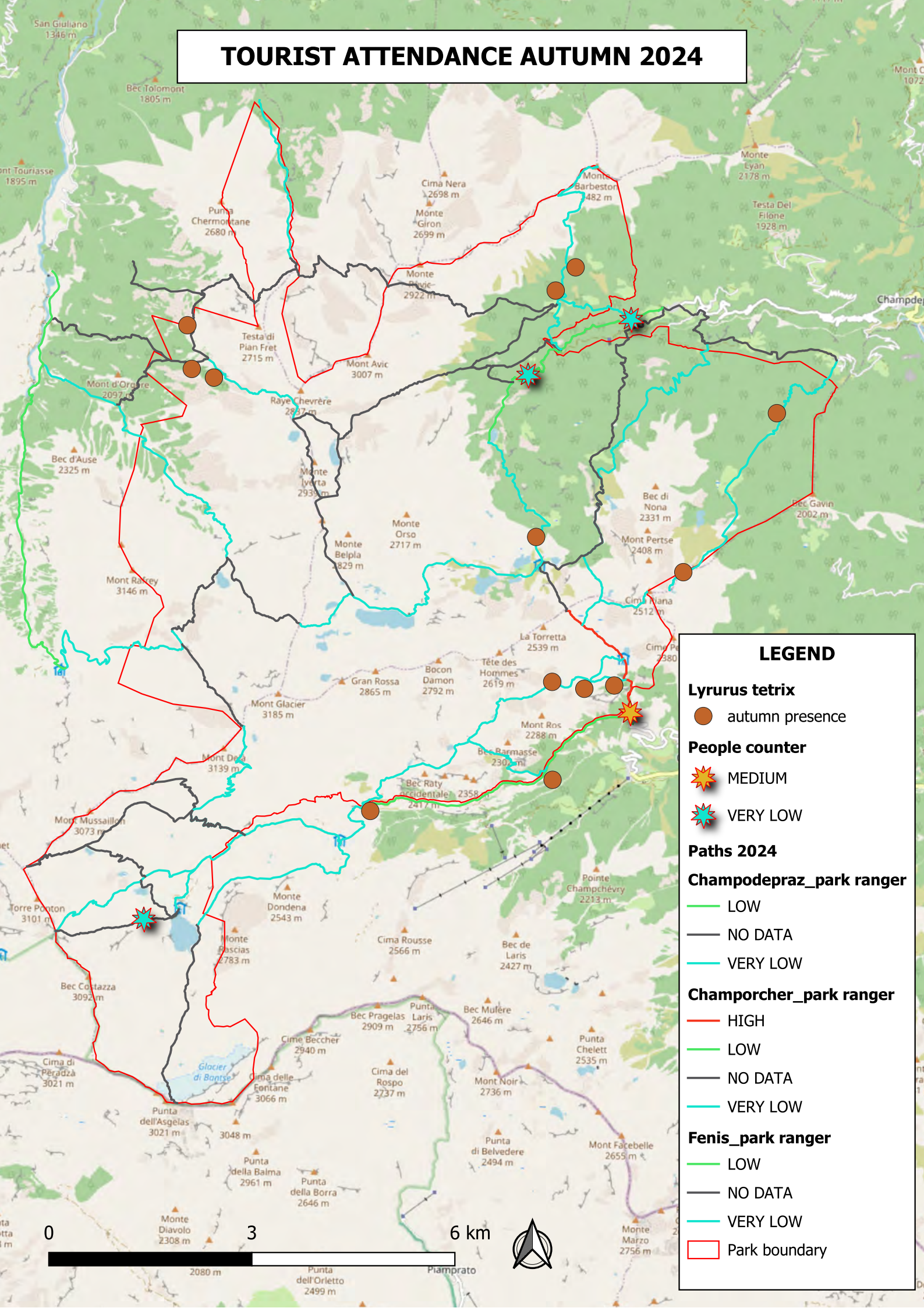
— VERY LOW

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2024



LEGEND

Lyrurus tetrix

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

Paths 2024

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km

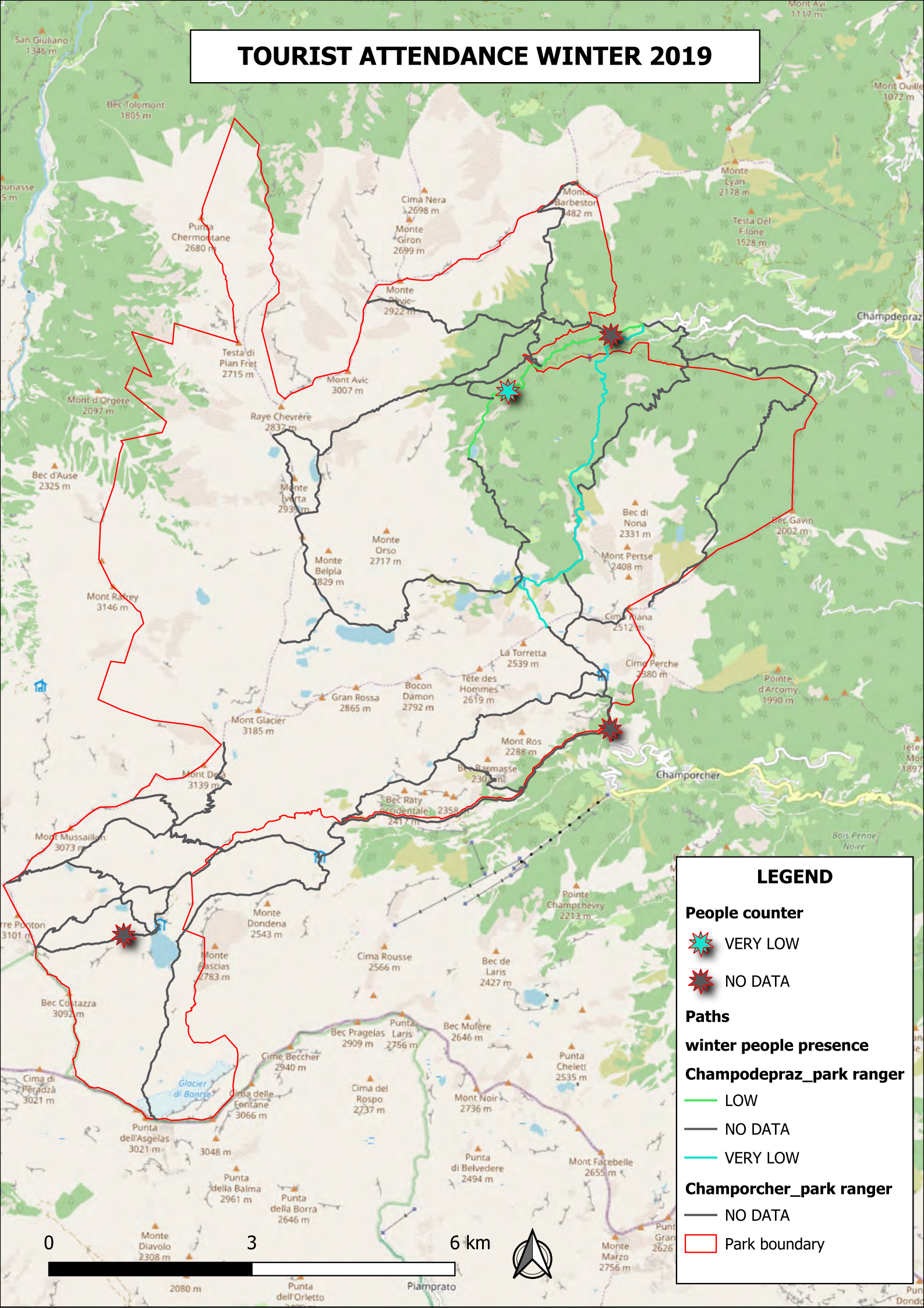


2080 m Punta dell'Orletto 2499 m Piamptrato

Annex 5 – Study Case PNMA

Disturbance from Tourists: Rock Ptarmigan


TOURIST ATTENDANCE WINTER 2019



LEGEND

People counter

 VERY LOW

 NO DATA

Paths

winter people presence

Champodepraz_park ranger

 LOW

 NO DATA

 VERY LOW

Champorcher_park ranger

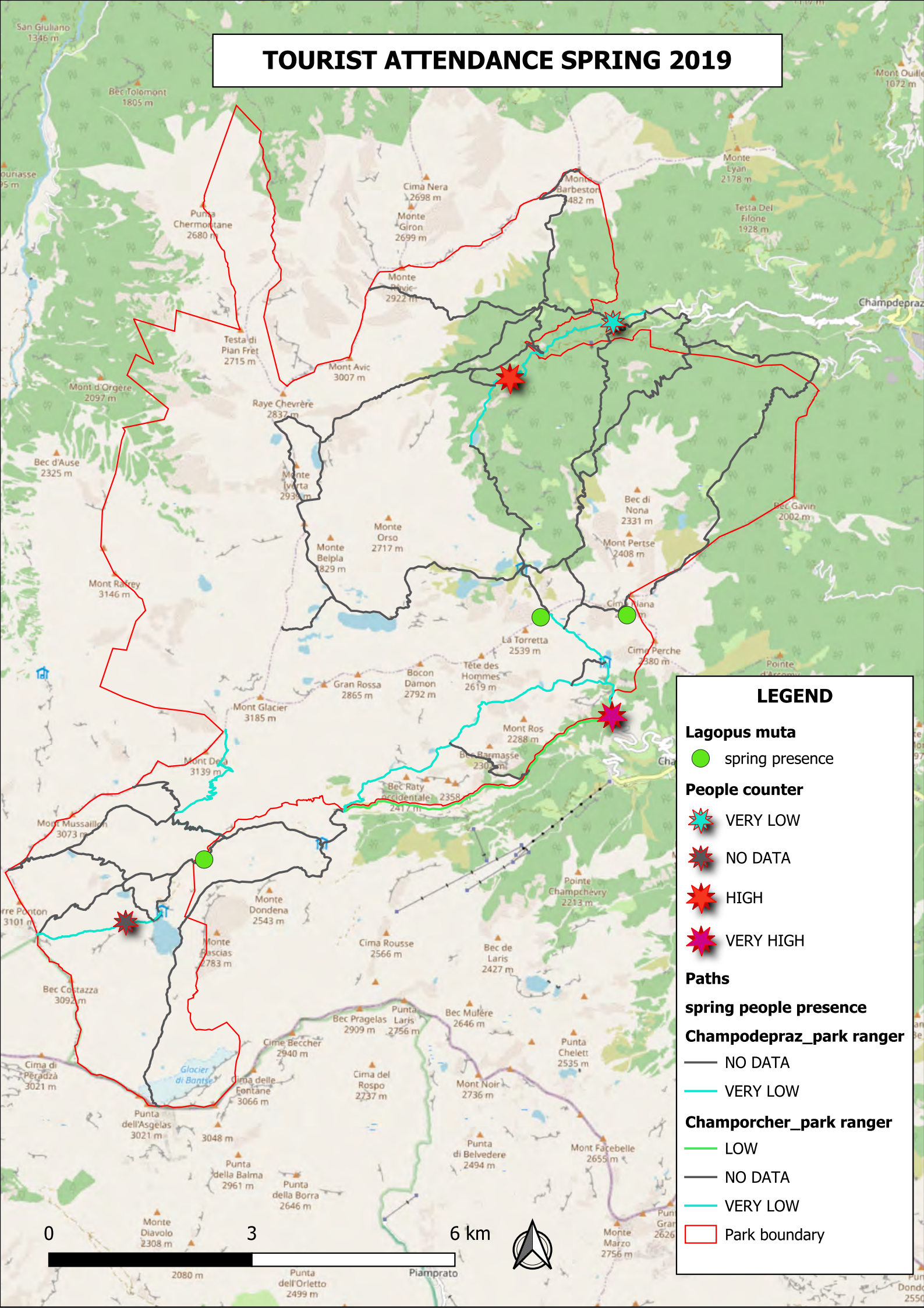
 NO DATA

 Park boundary

0 3 6 km



TOURIST ATTENDANCE SPRING 2019



LEGEND

Lagopus muta

● spring presence

People counter

★ VERY LOW

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

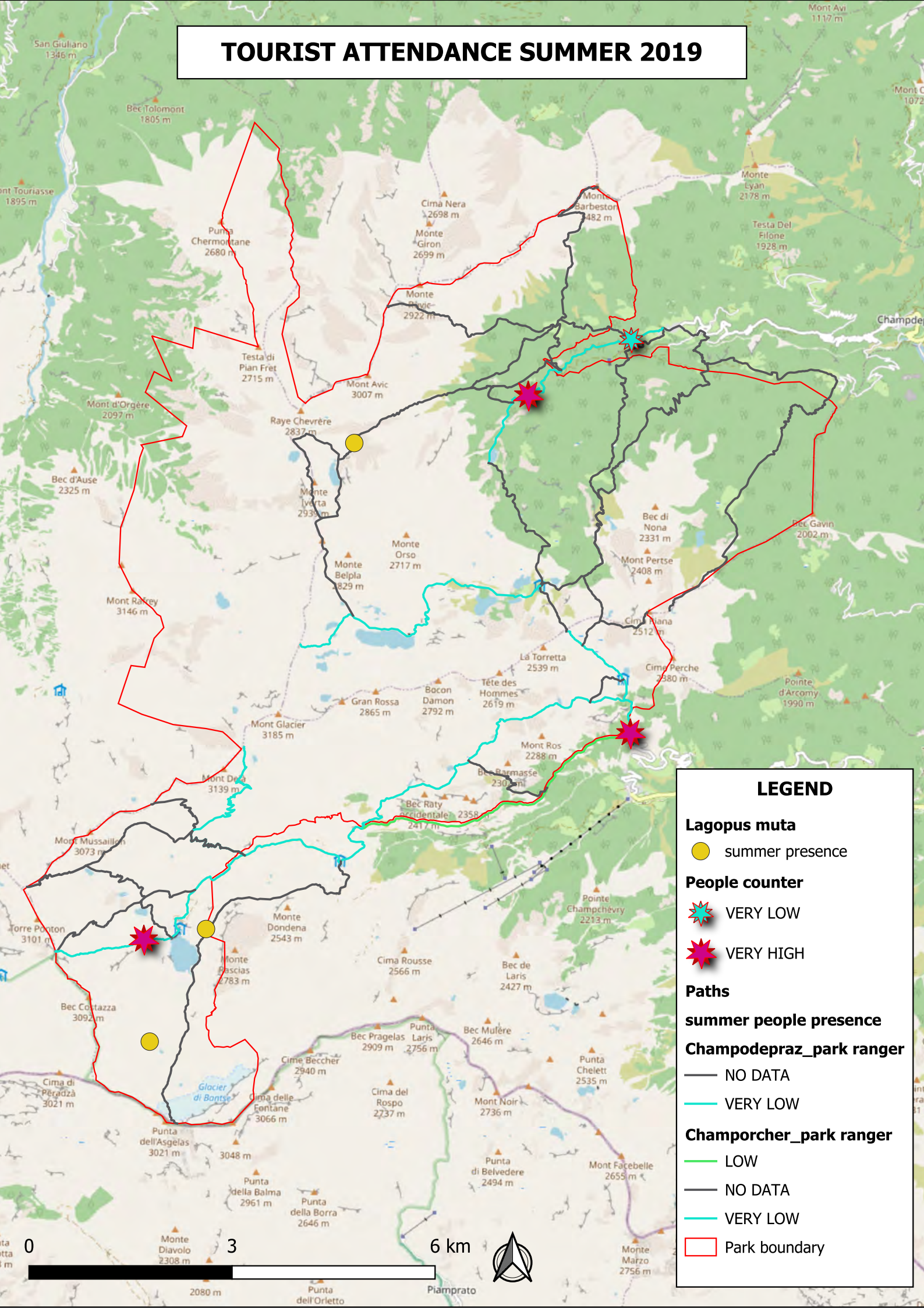
□ Park boundary

0 3 6 km





2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2019



LEGEND

Lagopus muta
 summer presence

People counter
 VERY LOW

 VERY HIGH

Paths
summer people presence
Champdepraz_park ranger

— NO DATA

— VERY LOW

Champraz_park ranger

— LOW

— NO DATA

— VERY LOW

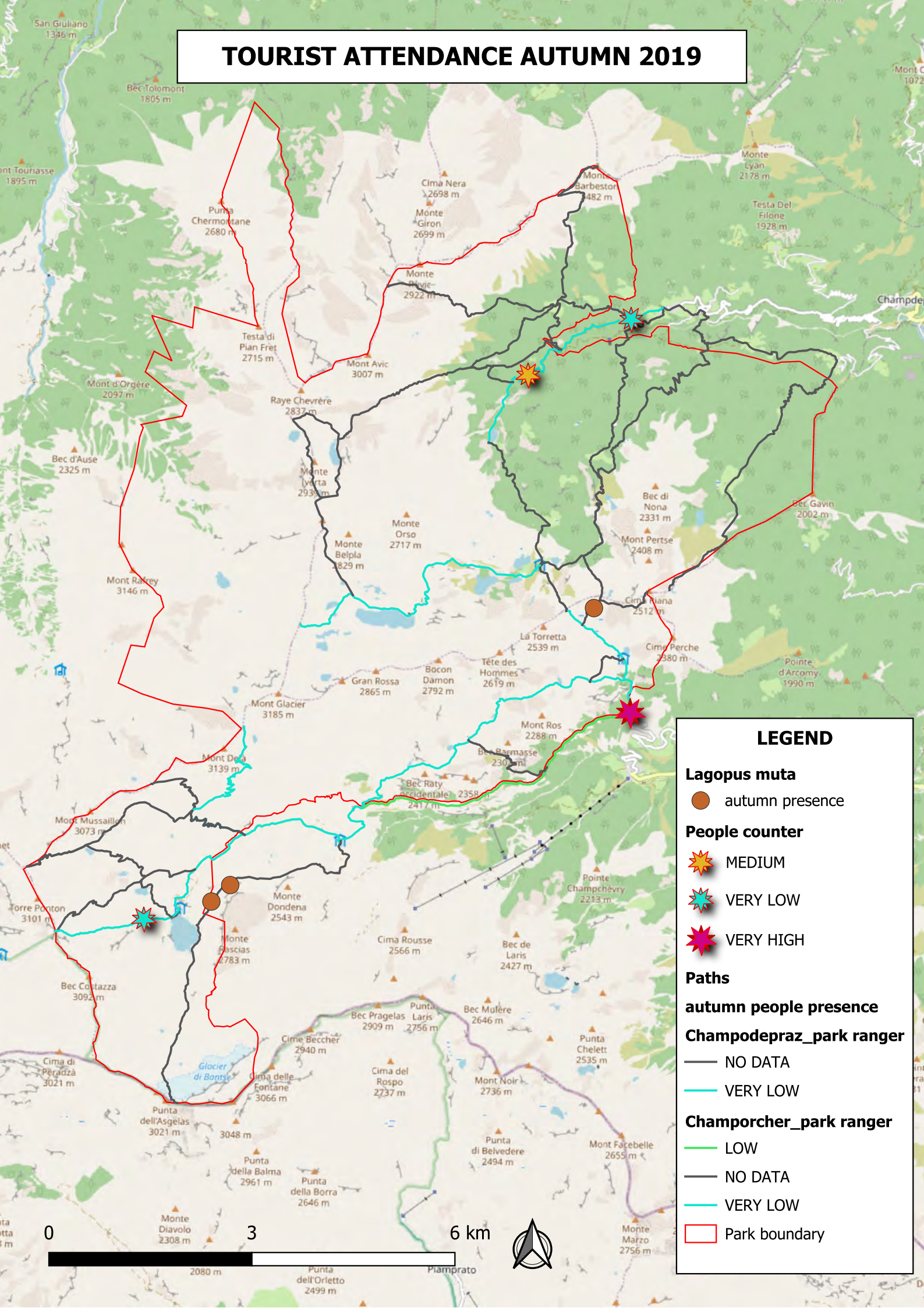
— Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE AUTUMN 2019



LEGEND

Lagopus muta

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ VERY HIGH

Paths

autumn people presence

Champodepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— NO DATA

— VERY LOW

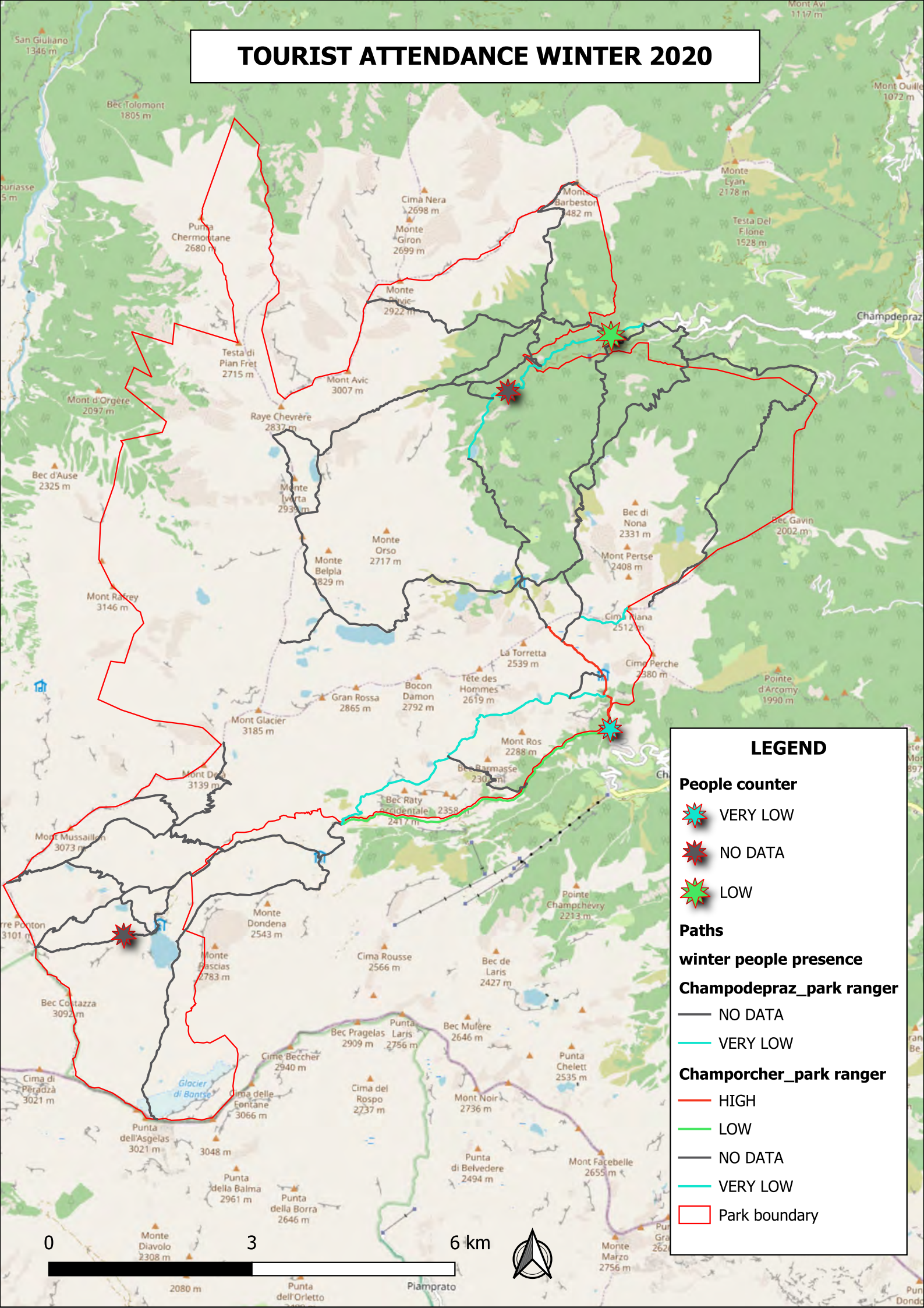
□ Park boundary

0 3 6 km

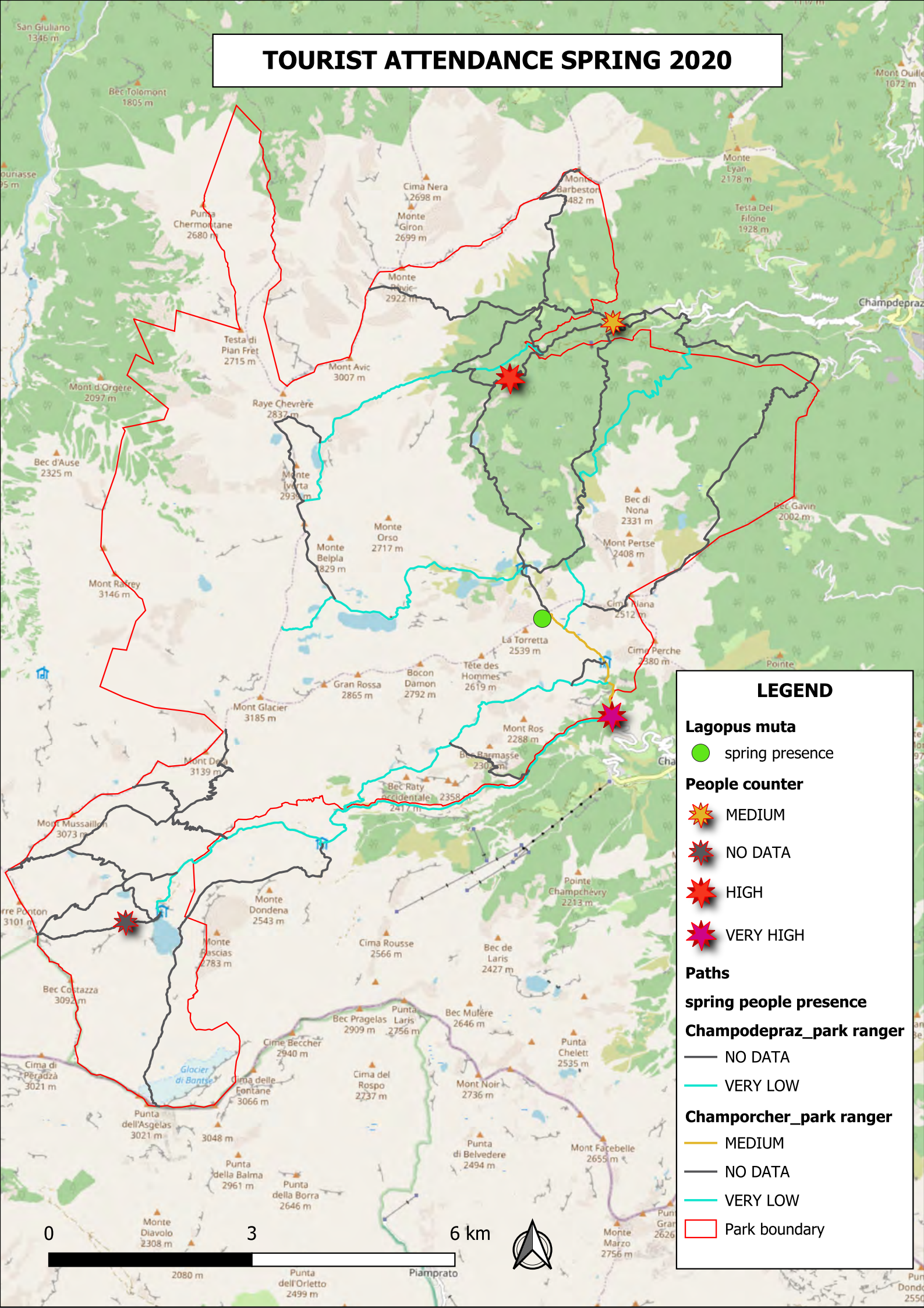


2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2020



TOURIST ATTENDANCE SPRING 2020



LEGEND

Lagopus muta

● spring presence

People counter

★ MEDIUM

★ NO DATA

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— MEDIUM

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km

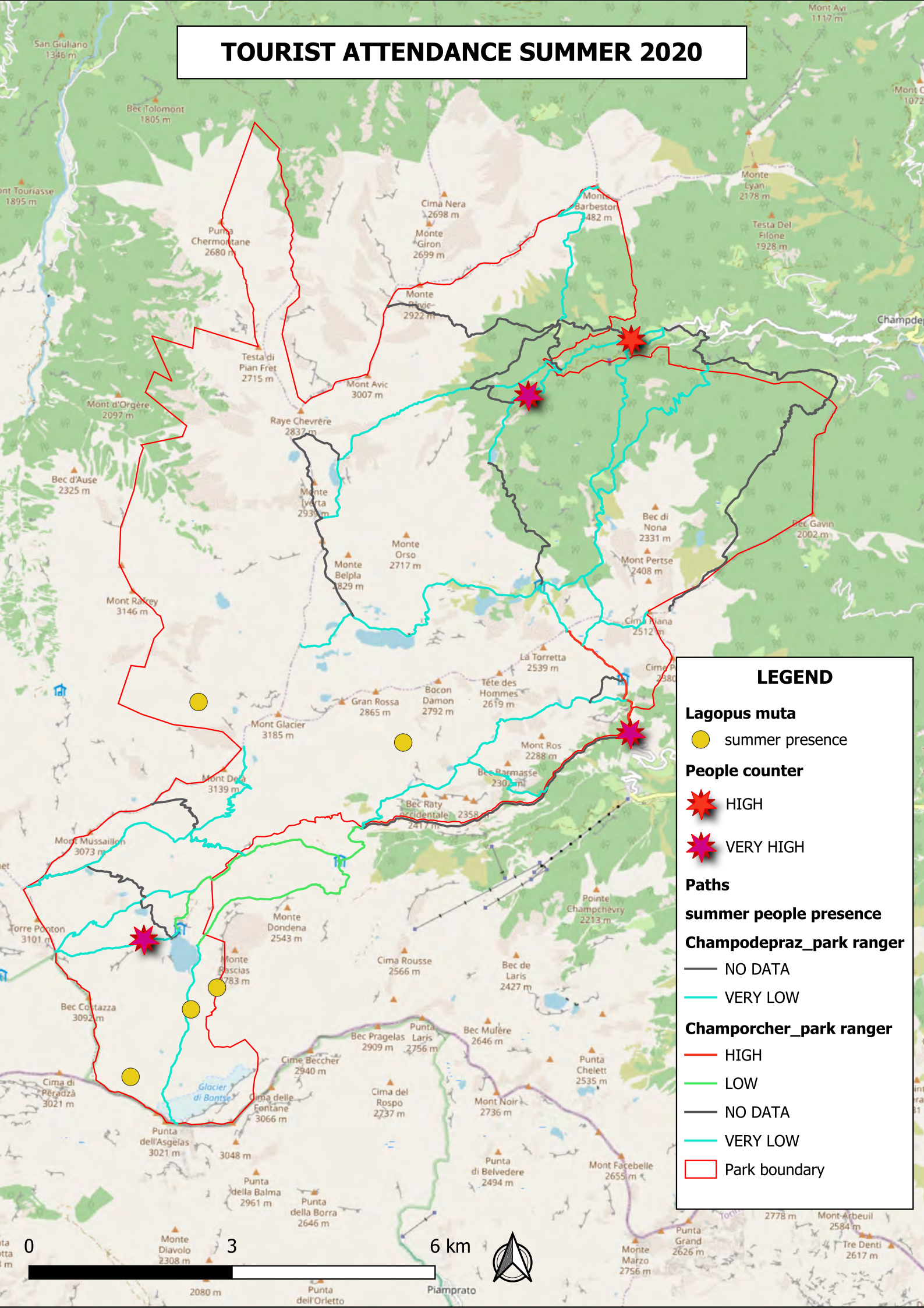


2080 m

Punta dell'Orletto 2499 m

Piamprato

TOURIST ATTENDANCE SUMMER 2020



LEGEND

Lagopus muta

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champodepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

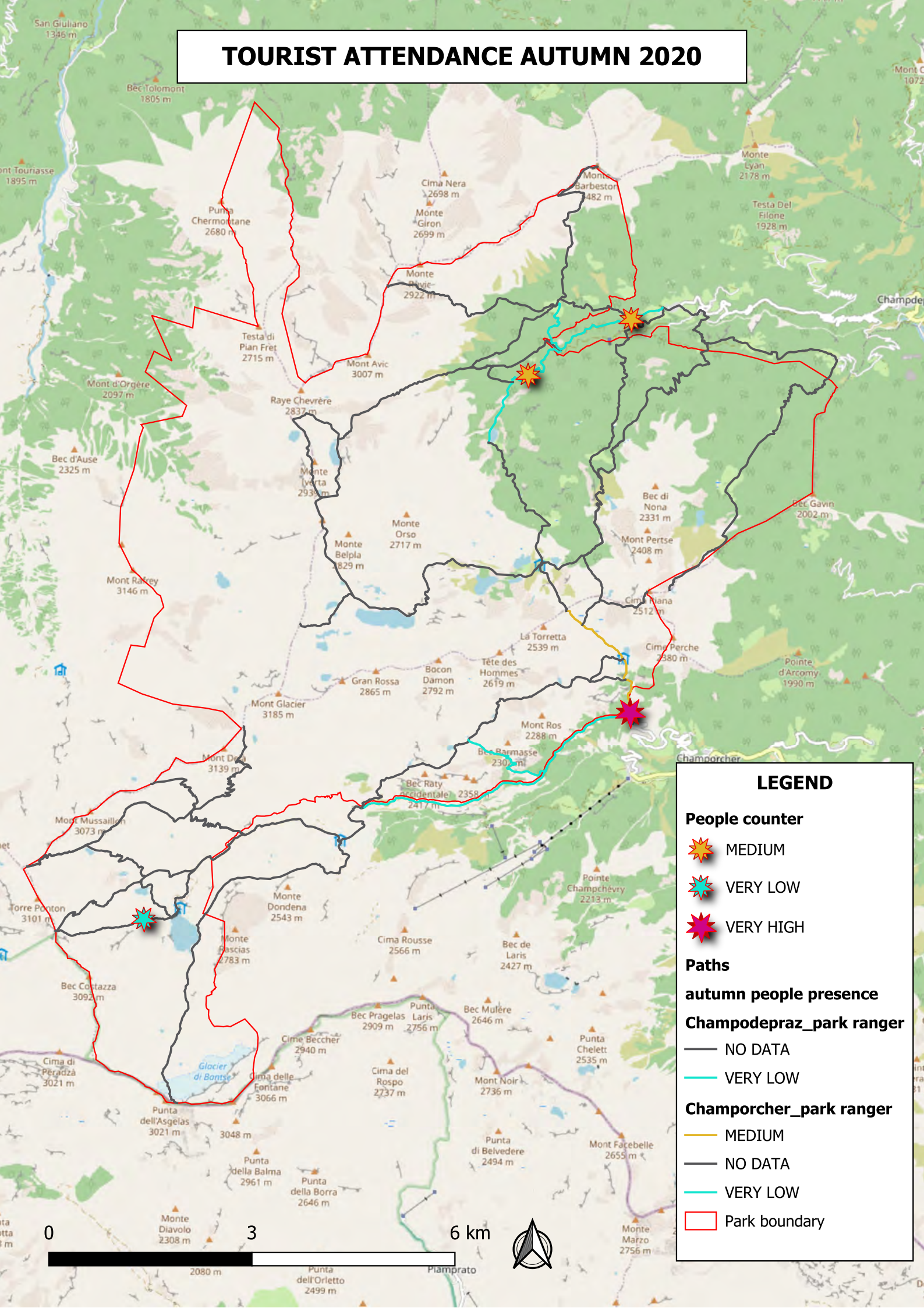
— VERY LOW

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2020



LEGEND



People counter

-  MEDIUM
-  VERY LOW
-  VERY HIGH

Paths

autumn people presence

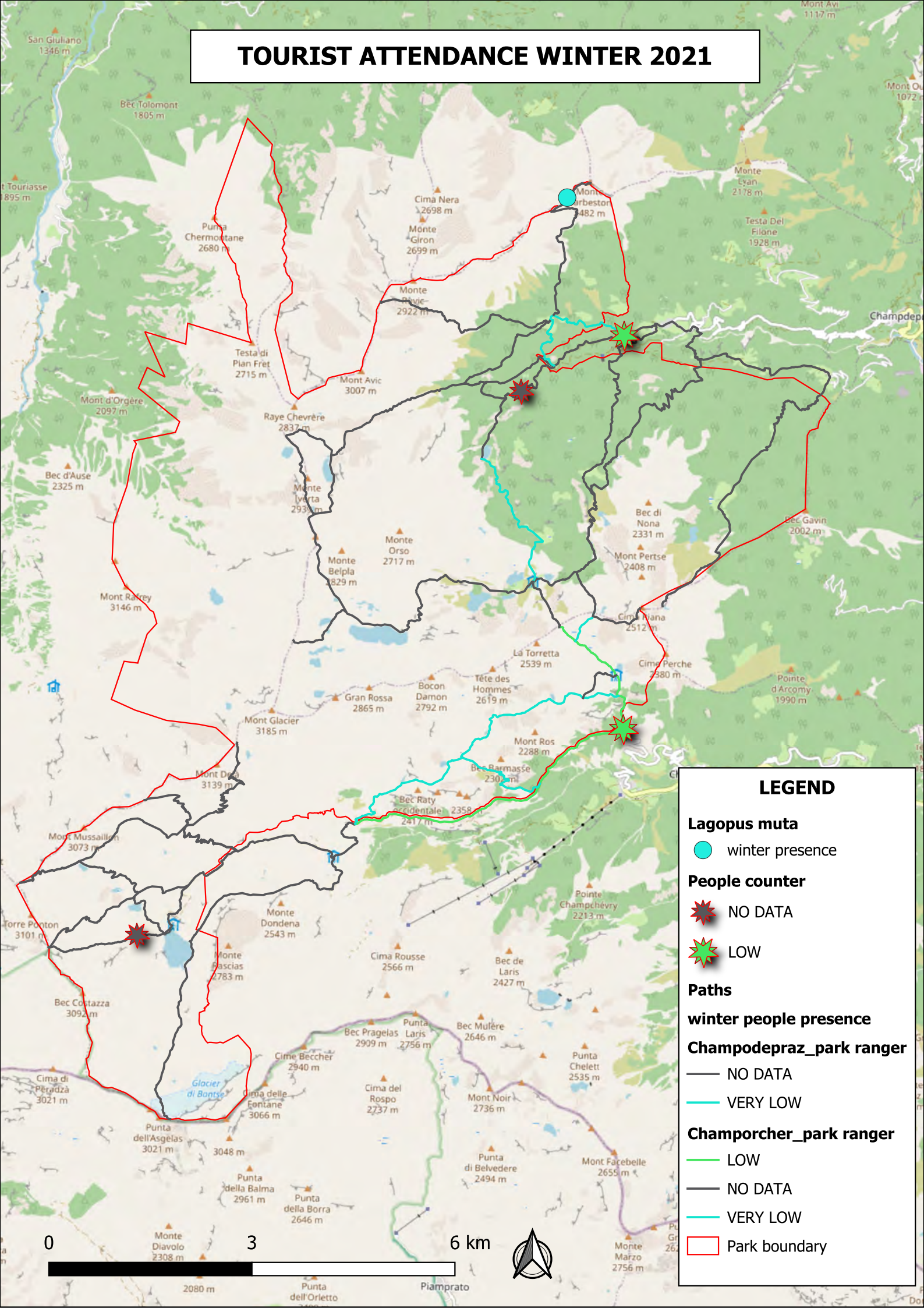
Champodepraz_park ranger

-  NO DATA
-  VERY LOW

Champorcher_park ranger

-  MEDIUM
-  NO DATA
-  VERY LOW
-  Park boundary

TOURIST ATTENDANCE WINTER 2021



LEGEND

Lagopus muta

● winter presence

People counter

★ NO DATA

★ LOW

Paths

winter people presence

Champdepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

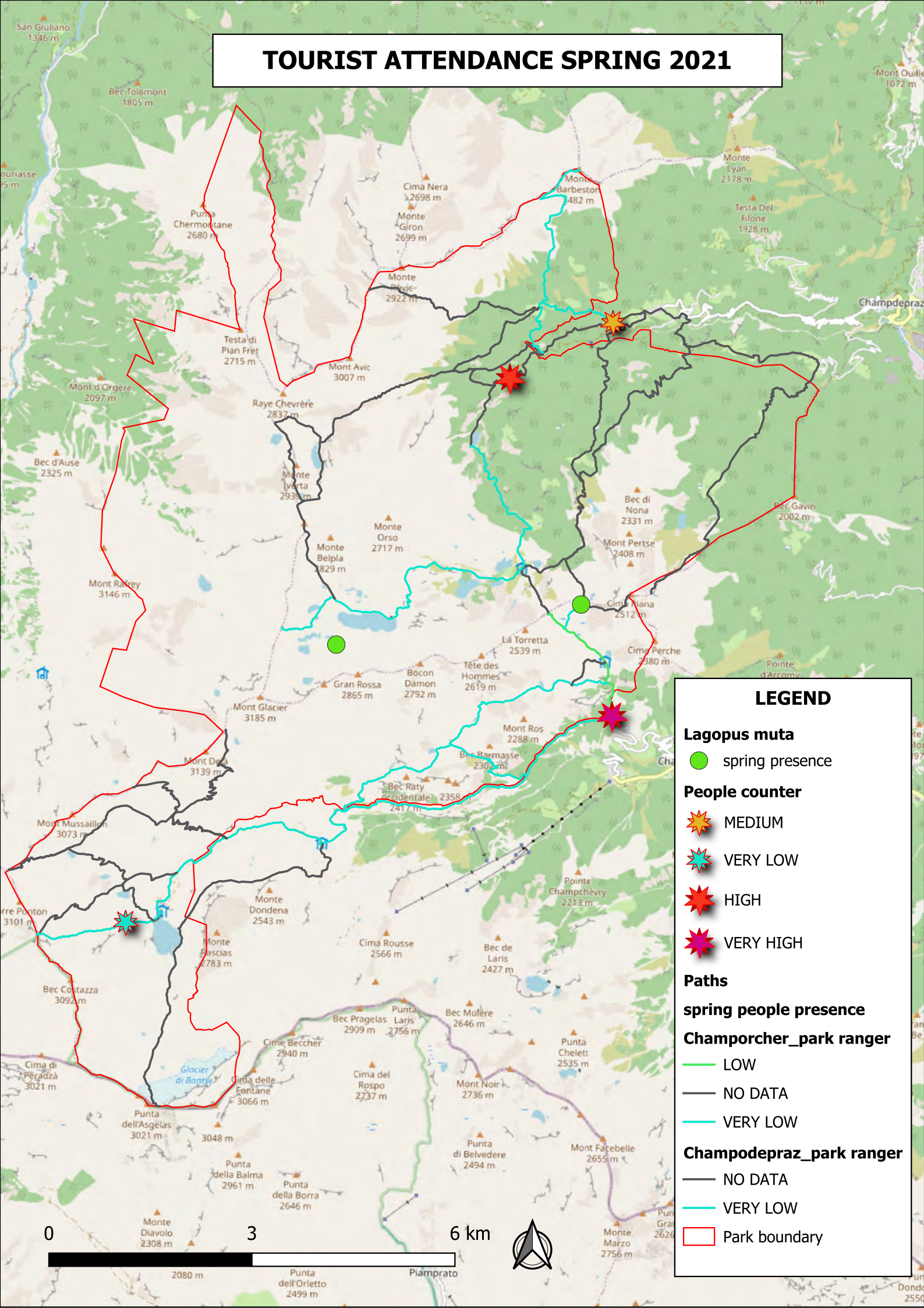
— LOW

— NO DATA

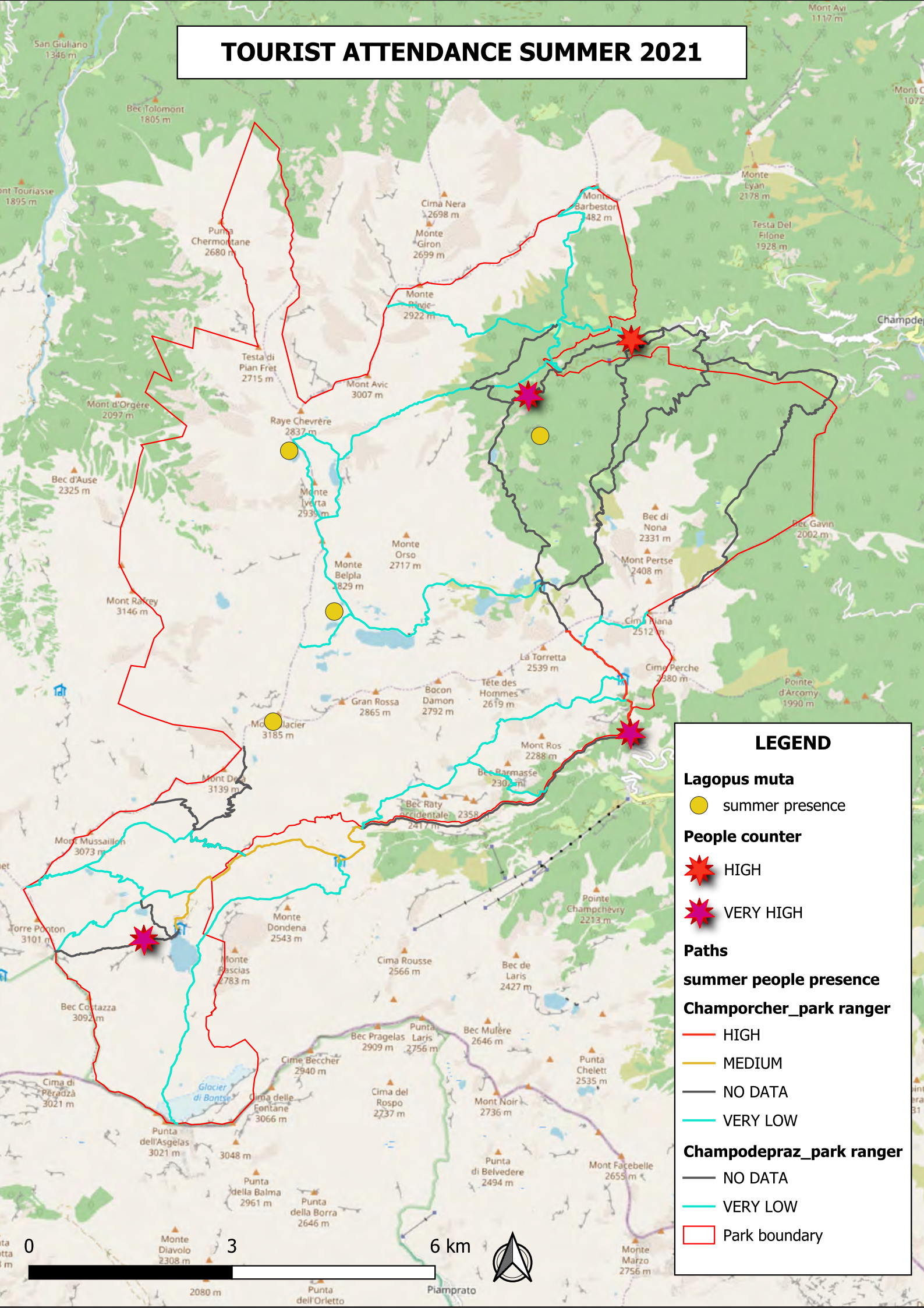
— VERY LOW

□ Park boundary

TOURIST ATTENDANCE SPRING 2021



TOURIST ATTENDANCE SUMMER 2021

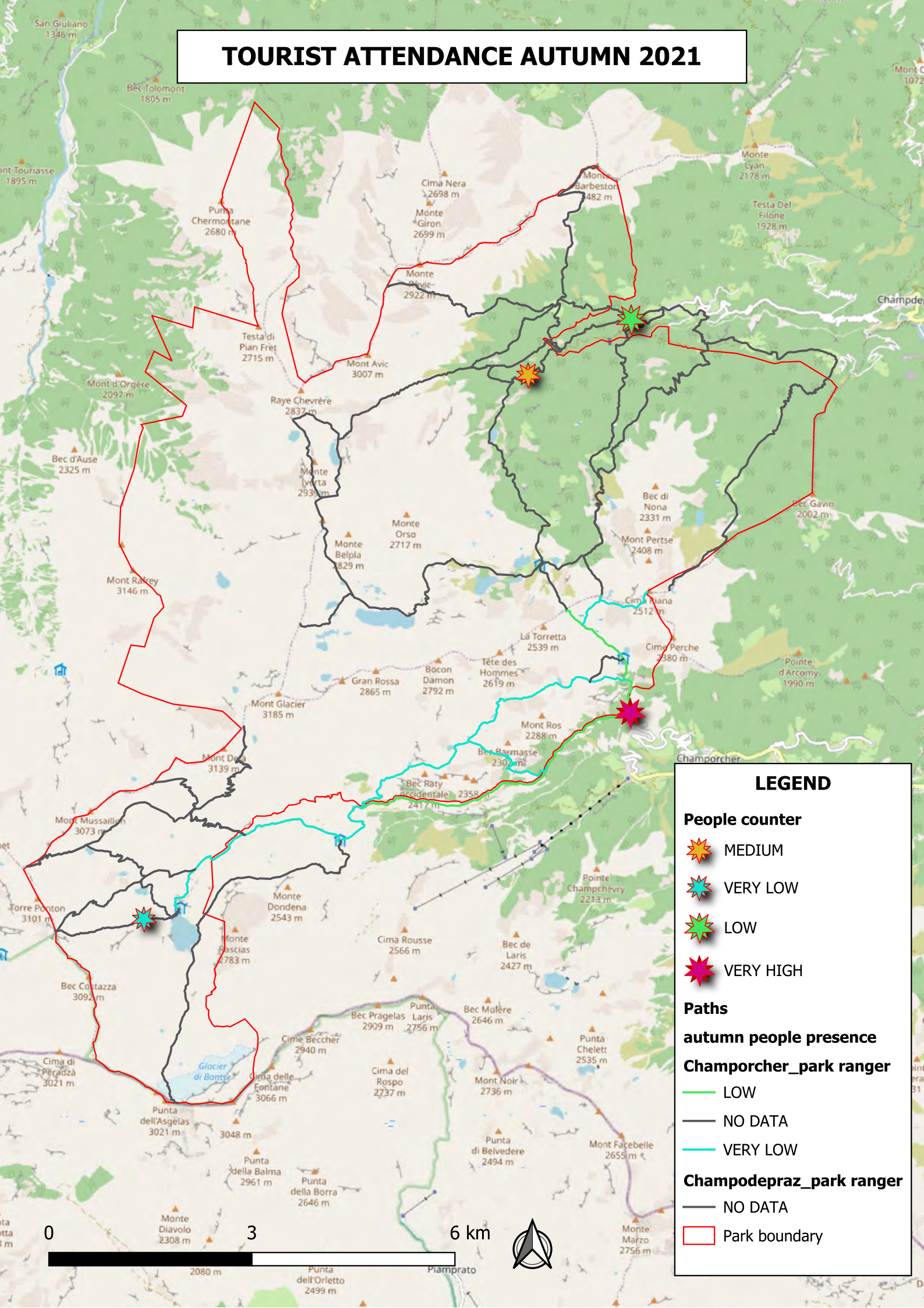


LEGEND

- Lagopus muta**
 - summer presence
- People counter**
 - ★ HIGH
 - ★ VERY HIGH
- Paths**
 - summer people presence
 - HIGH
 - MEDIUM
 - NO DATA
 - VERY LOW
- Champorcher_park ranger**
 - NO DATA
 - VERY LOW
- Champodepraz_park ranger**
 - NO DATA
 - VERY LOW
 - Park boundary







TOURIST ATTENDANCE AUTUMN 2021



LEGEND




People counter

-  MEDIUM
-  VERY LOW
-  LOW
-  VERY HIGH



Paths

autumn people presence

Champorcher_park ranger

-  LOW
-  NO DATA
-  VERY LOW

Champodepraz_park ranger

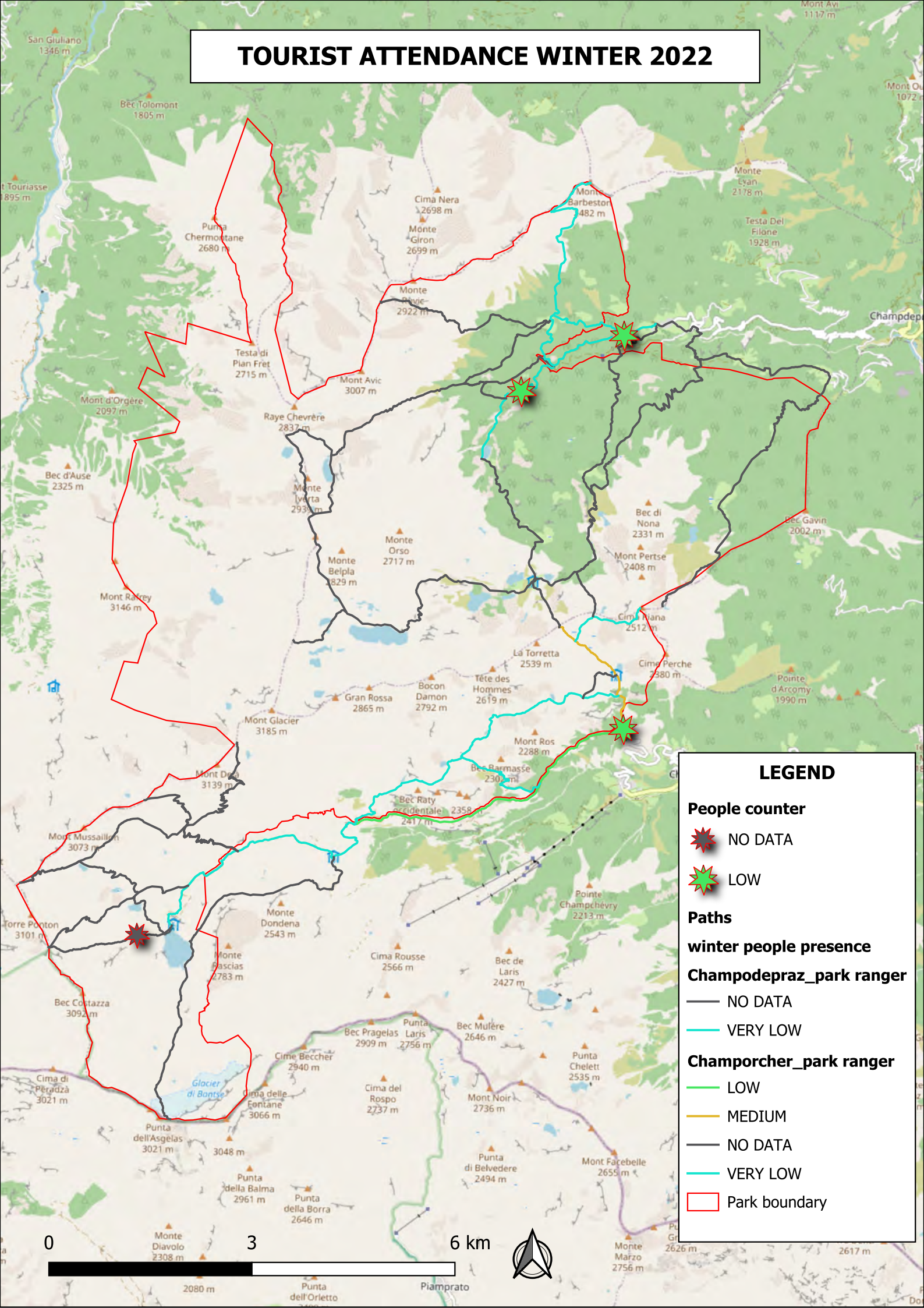
-  NO DATA
-  Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2022



LEGEND

People counter

- NO DATA
- LOW

Paths

winter people presence

Champodepraz_park ranger

- NO DATA
- VERY LOW

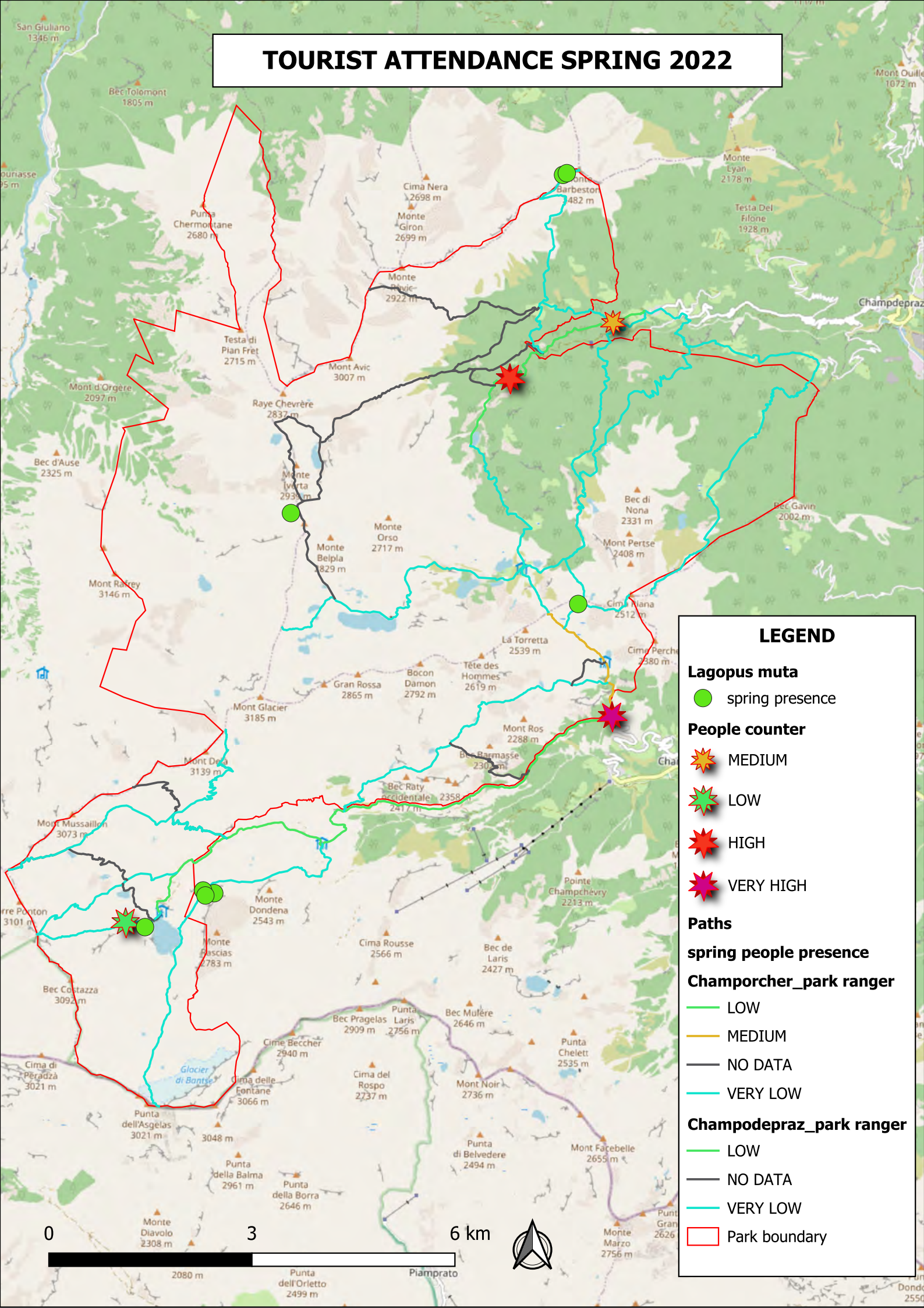
Champorcher_park ranger

- LOW
- MEDIUM
- NO DATA
- VERY LOW
- Park boundary

0 3 6 km



TOURIST ATTENDANCE SPRING 2022



LEGEND

Lagopus muta

● spring presence

People counter

★ MEDIUM

★ LOW

★ HIGH

★ VERY HIGH

Paths

spring people presence

Champdorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

— Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2022



LEGEND

Lagopus muta

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

summer people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Champodepraz_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

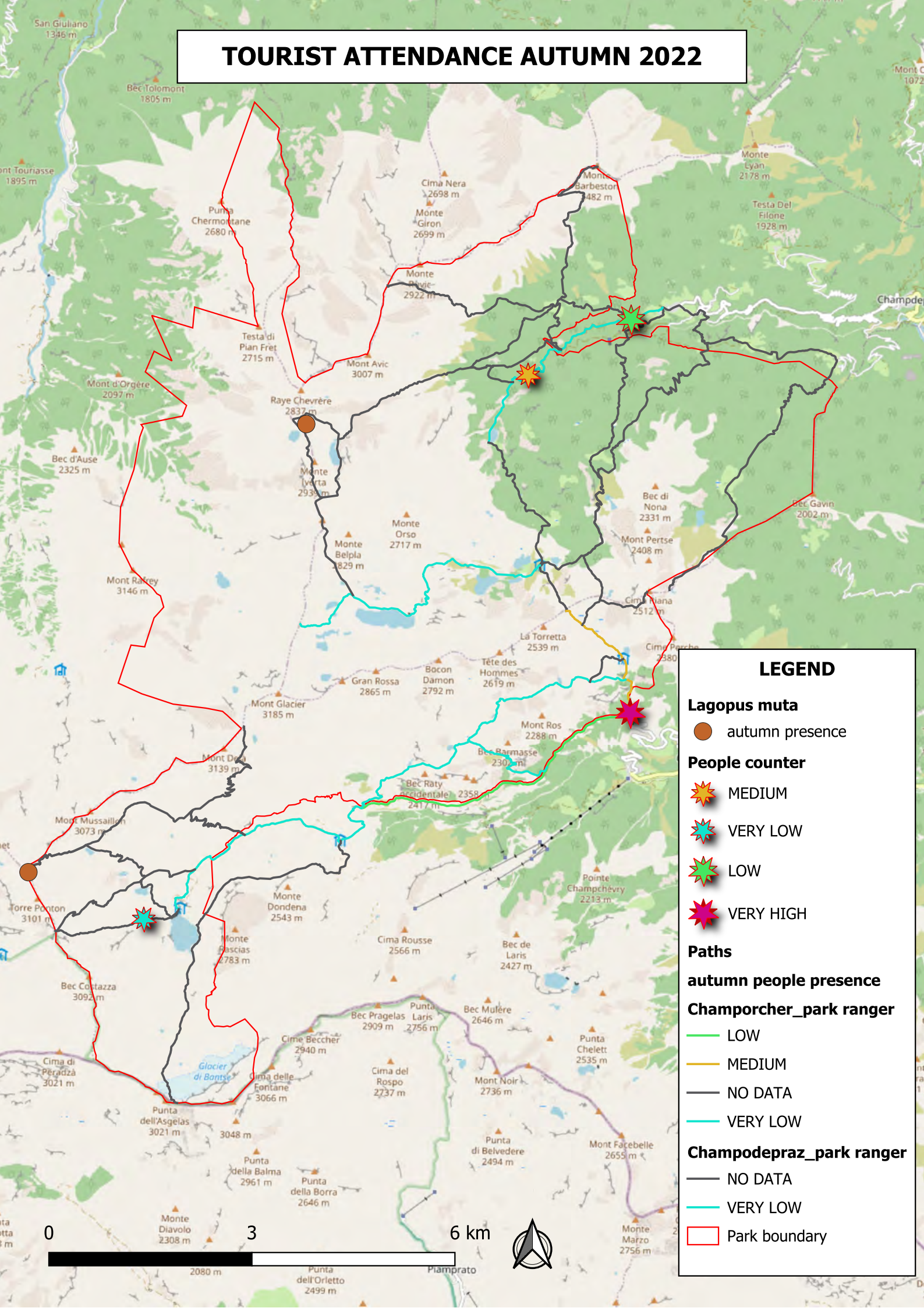
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto Piamptrato

TOURIST ATTENDANCE AUTUMN 2022



LEGEND

Lagopus muta

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths

autumn people presence

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champodepraz_park ranger

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km

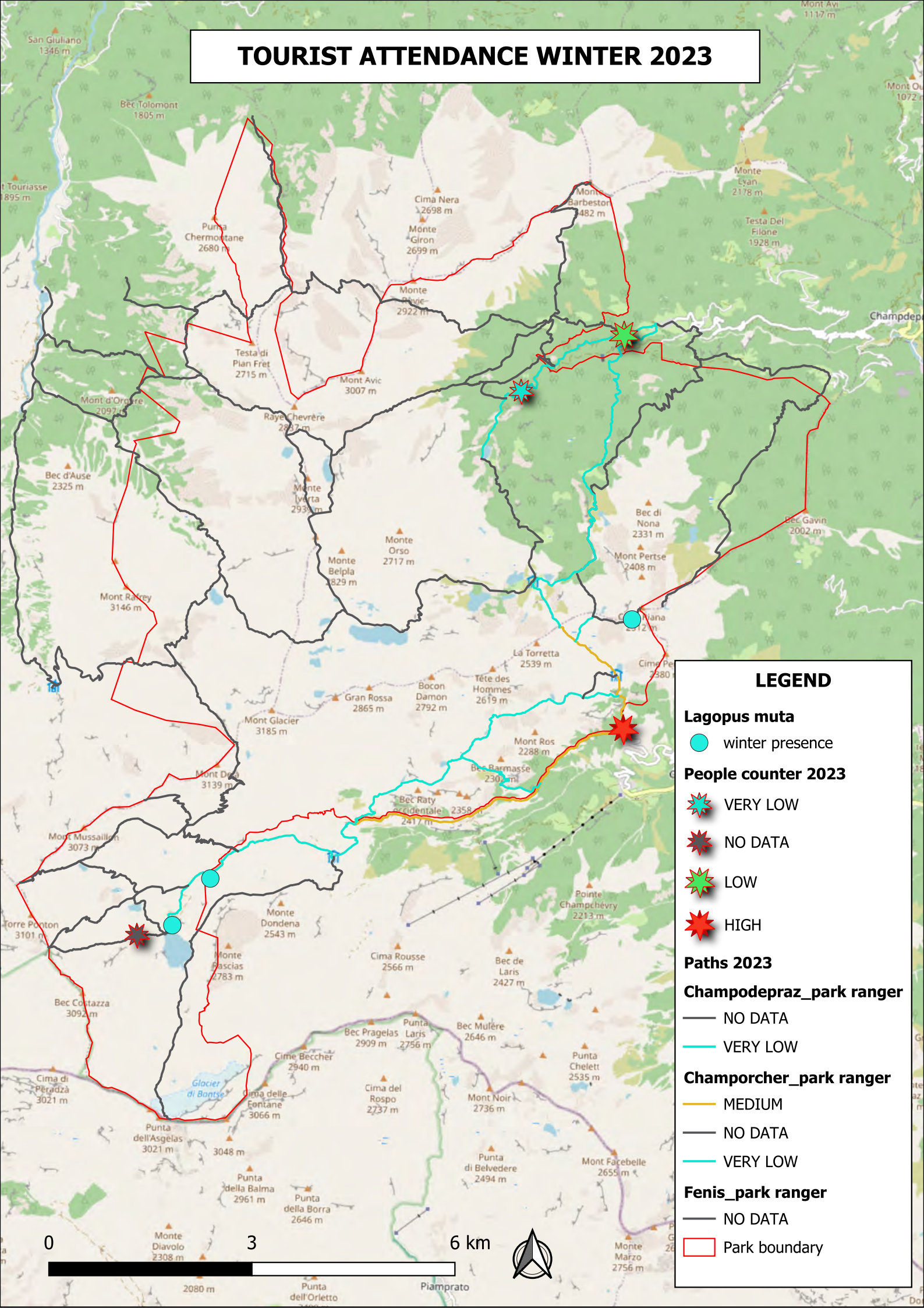


2080 m

Punta dell'Orletto 2499 m

Piamprato

TOURIST ATTENDANCE WINTER 2023



LEGEND

Lagopus muta

● winter presence

People counter 2023

★ VERY LOW

★ NO DATA

★ LOW

★ HIGH

Paths 2023

Champodepraz_park ranger

— NO DATA

— VERY LOW

Champorcher_park ranger

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

□ Park boundary

0 3 6 km



2080 m

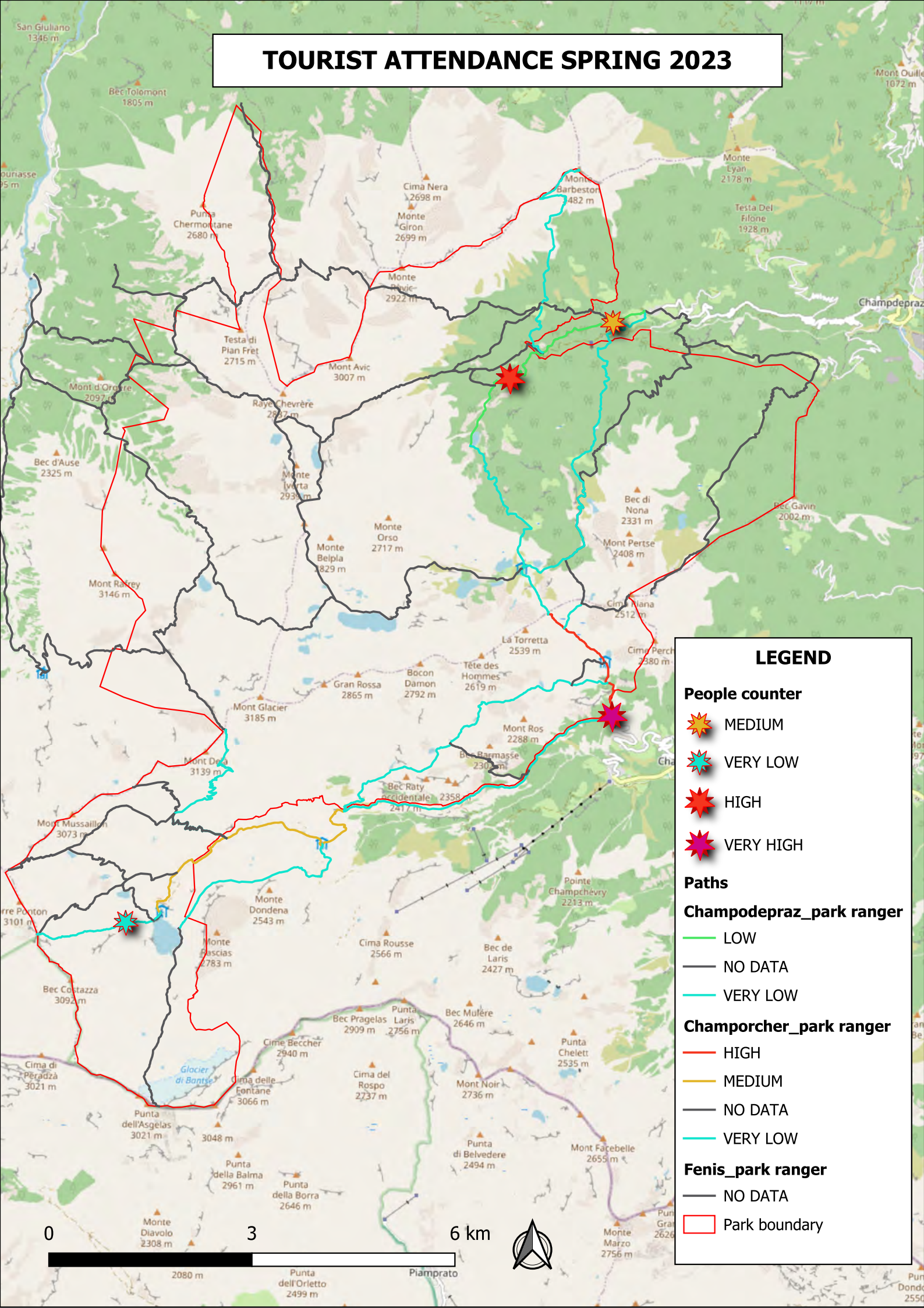
3

6 km

Piamprato





Punta dell'Orletto

TOURIST ATTENDANCE SPRING 2023






LEGEND

People counter





-  MEDIUM
-  VERY LOW
-  HIGH
-  VERY HIGH

Paths



Champdepraz_park ranger

-  LOW
-  NO DATA
-  VERY LOW

Champorcher_park ranger

-  HIGH
-  MEDIUM
-  NO DATA
-  VERY LOW

Fenis_park ranger

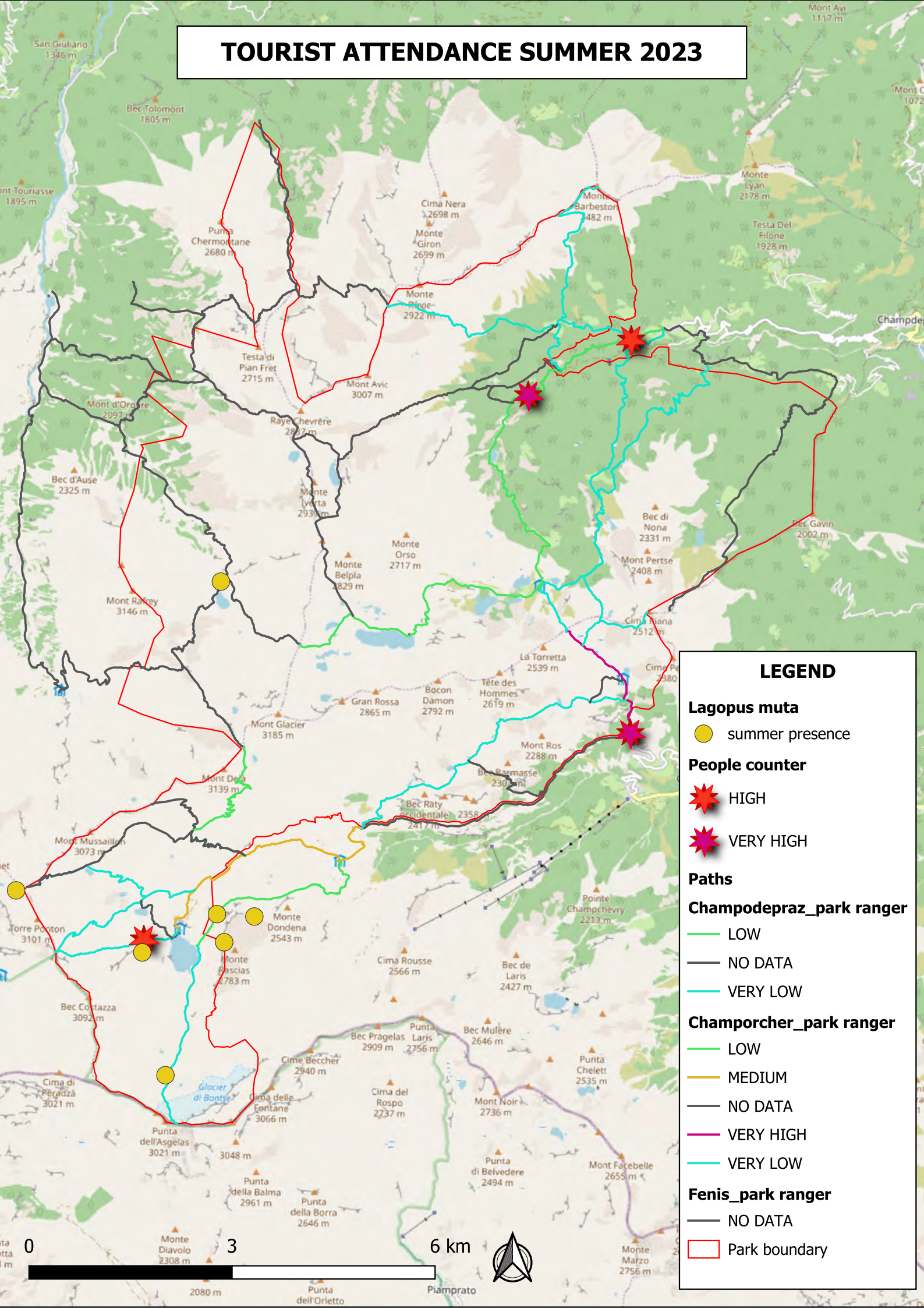
-  NO DATA
-  Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2023



LEGEND

Lagopus muta

● summer presence

People counter

★ HIGH

★ VERY HIGH

Paths

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

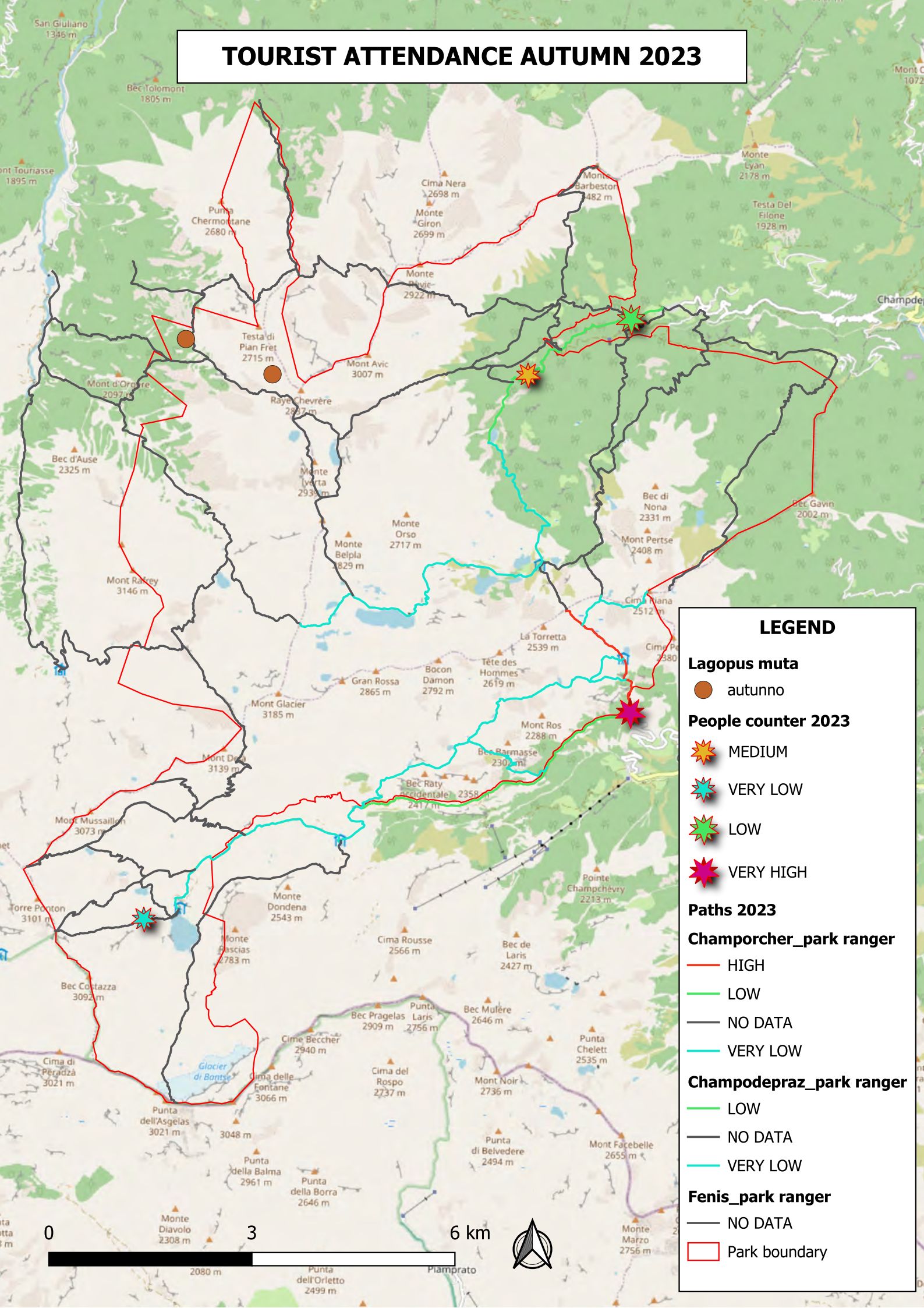
— NO DATA

□ Park boundary

0 3 6 km



TOURIST ATTENDANCE AUTUMN 2023



LEGEND

Lagopus muta

● autunno

People counter 2023

★ MEDIUM

★ VERY LOW

★ LOW

★ VERY HIGH

Paths 2023

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

Champodepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

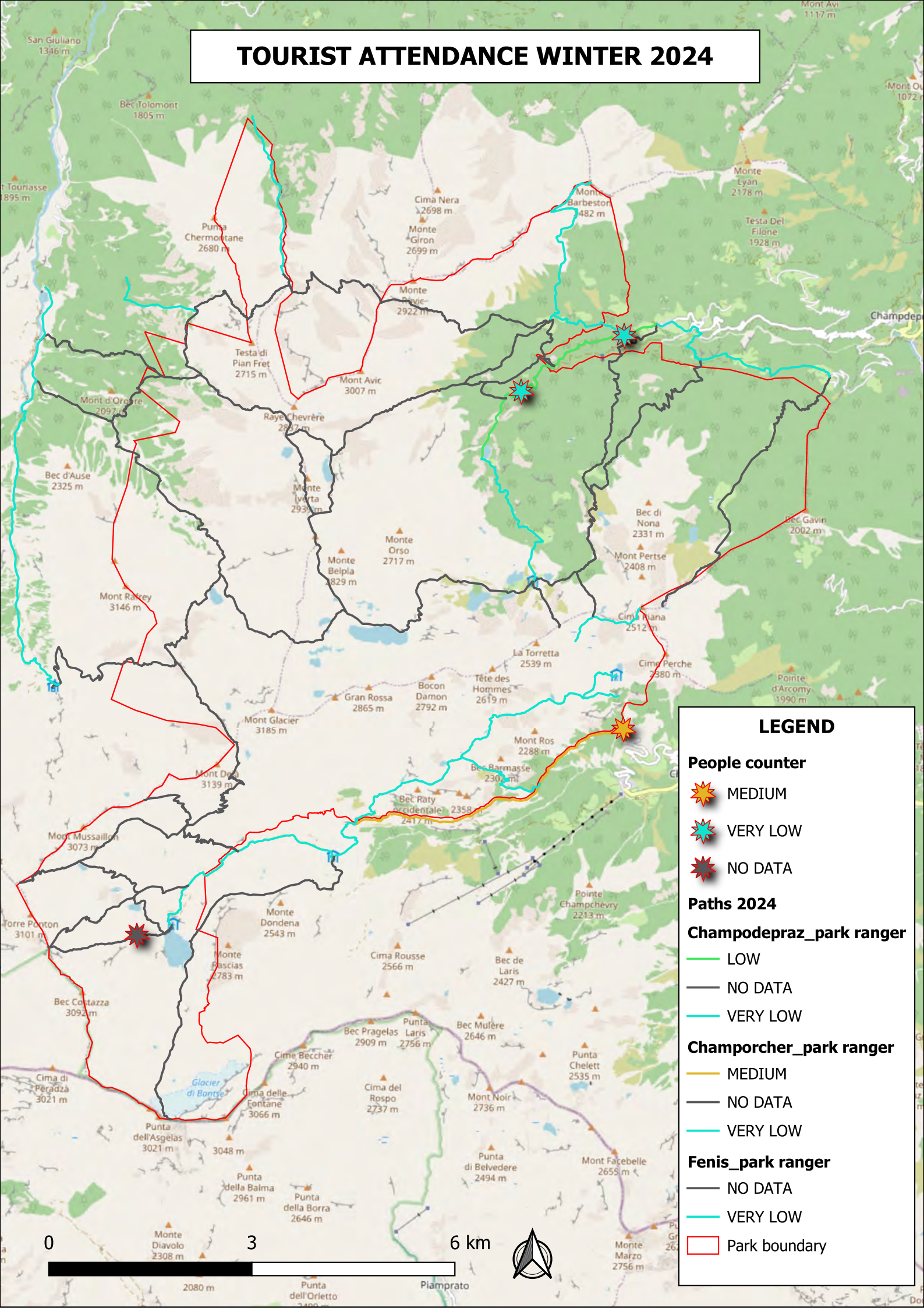
□ Park boundary

0 3 6 km






2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE WINTER 2024






LEGEND



People counter

-  MEDIUM
-  VERY LOW
-  NO DATA



Paths 2024

-  LOW
-  NO DATA
-  VERY LOW




Champodepraz_park ranger

-  MEDIUM
-  NO DATA
-  VERY LOW

Champorcher_park ranger

-  NO DATA
-  VERY LOW

Fenis_park ranger

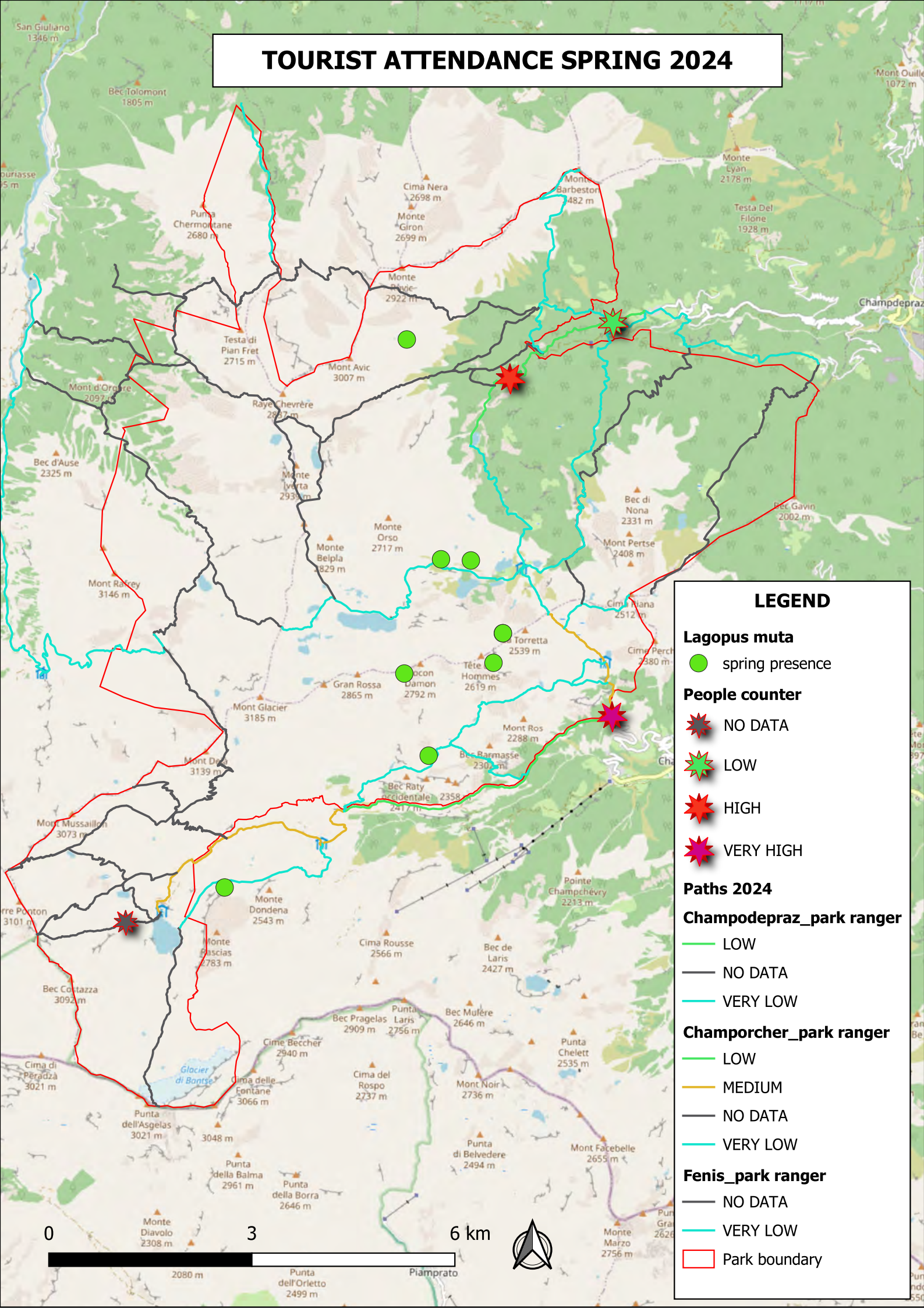
-  NO DATA
-  VERY LOW
-  Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2480 m Piamptrato

TOURIST ATTENDANCE SPRING 2024



LEGEND

Lagopus muta

● spring presence

People counter

★ NO DATA

★ LOW

★ HIGH

★ VERY HIGH

Paths 2024

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Fenis_park ranger

— NO DATA

— VERY LOW

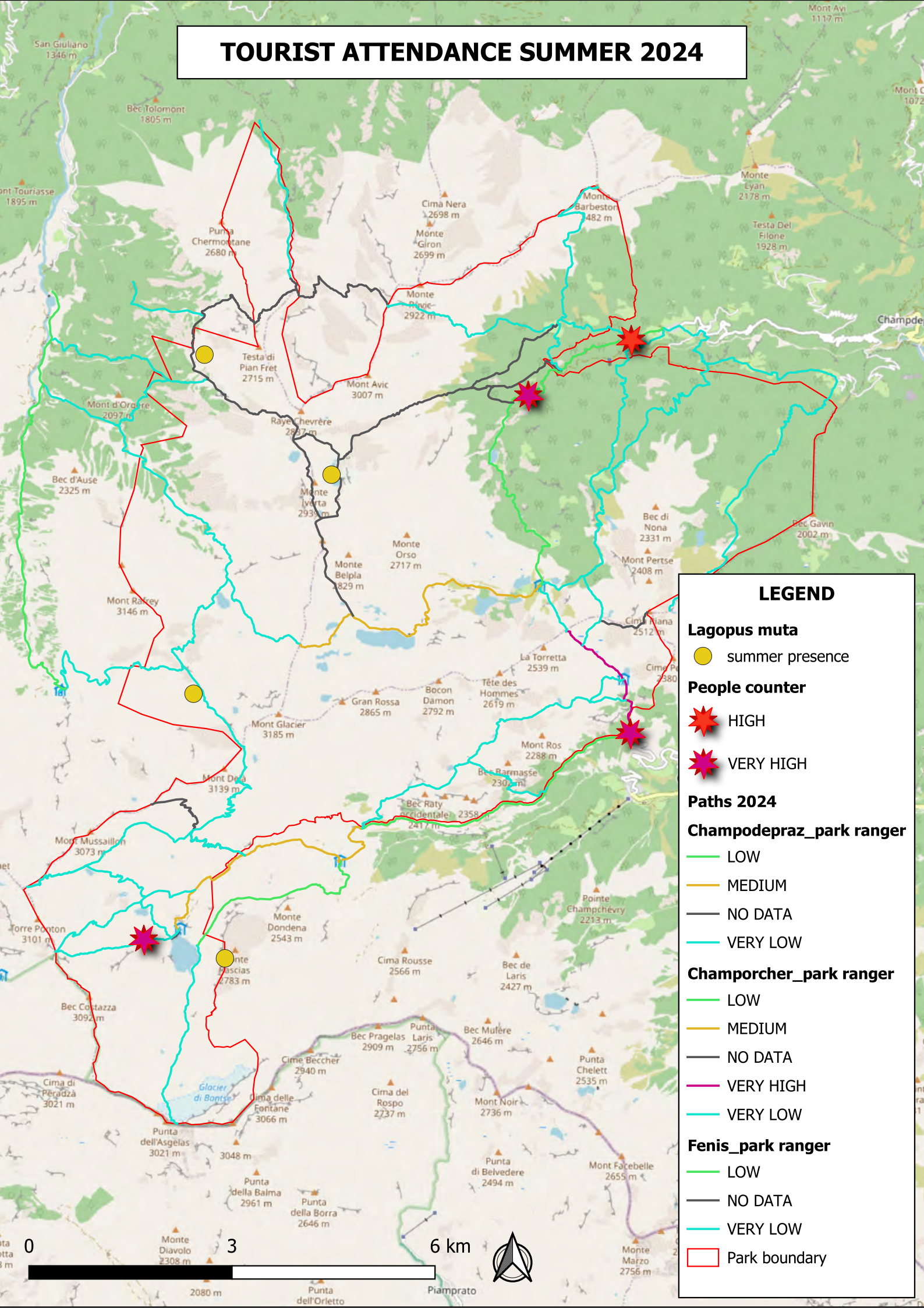
□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

TOURIST ATTENDANCE SUMMER 2024



LEGEND

Lagopus muta

● summer presence

People counter

★ HIGH

★★ VERY HIGH

Paths 2024

Champdepraz_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY LOW

Champorcher_park ranger

— LOW

— MEDIUM

— NO DATA

— VERY HIGH

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

— VERY LOW

□ Park boundary

TOURIST ATTENDANCE AUTUMN 2024



LEGEND

Lagopus muta

● autumn presence

People counter

★ MEDIUM

★ VERY LOW

Paths 2024

Champdepraz_park ranger

— LOW

— NO DATA

— VERY LOW

Champorcher_park ranger

— HIGH

— LOW

— NO DATA

— VERY LOW

Fenis_park ranger

— LOW

— NO DATA

— VERY LOW

□ Park boundary

0 3 6 km



2080 m Punta dell'Orletto 2499 m Piamptrato

Annex 6 – Focus Group

A Focus Group was created in order to collect qualitative information from experts on wildlife and habitat fragmentation of protected areas partners of LiveAlpsNature.

| APA | Expert | Interview date | NBA/Other activities | Disturbance on animal/habitat | Solution | Respect | To do | Notes |
|-----|------------------------------|----------------|--|--|---|--|-------|--|
| TNP | Alenka Petrinjak, Majda Odar | 19/05/25 | Skiing | Yes, on rock ptarmigan and black grouse | Specific areas have been identified for the animal protection areas; restrictions on the use of trails | No, especially in winter | | |
| | | | Biking | Yes, on wildlife and habitat | Specific disturbance-free areas have been identified for the animal protection; restrictions on the use of trails | No, especially in winter | | |
| | | | Motor vehicles | Yes, on wildlife and habitat | Forbidden | No, especially in winter | | |
| | | | Paragliding | Yes, on Birds and Mammals | Specific areas have been identified where it can be practiced | No, it is practiced in an area larger than that permitted and it is difficult to issue fines | | |
| | | | Mushrooms pickers and other NBA are increasing | Yes, in some areas there are points where they have placed photo traps and they have noticed that when there are mushroom pickers, no more animals pass by | No | | | |
| | | | Feeding wildlife with mandala prepared with vegetables | Yes, on wildlife | No rules | | | |
| | | | | | | | | Planning record data on direct disturbance to animals and habitats in the future; Having access to various forums and sites dedicated to outdoor activities. XCTools; Xcglobe.com. |

| APA | Expert | Interview date | NBA/Other activities | Disturbance on animal/habitat | Solution | Respect | To do | Notes |
|------|--------------------|----------------|---|--|---|------------|-------|-------|
| APO | Luca Martignoni | 19/05/25 | Paragliding, glider | Yes, on golden eagle in particular | | | | |
| | | | Pictures taken with drones or in forbidden areas and posted on the social | Yes, more people are attracted to go to those places | | | | |
| | | | Ski mountaineering | Yes, where there are many skiers there are few traces of the rock ptarmigan | Identification disturbance-free areas | Not always | | |
| | | | Dogs | Yes, they attack roe deer and fox cubs | New rule: no dogs in winter | | | |
| | | | Cats in holiday | Yes, predation on wildlife, sanitary problems | No rules | | | |
| | | | Hiking | Yes, on the habitat fragmentation: chamois avoid the most frequented trails | No rules | | | |
| PNMA | Anna Foieri | 19/05/25 | Snowshoeing | Yes, rock ptarmigan and black grouse | Obligation to remain on the paths with a tolerance of 20 m on both sides | Not always | | |
| | | | Ski mountaineering | Yes, rock ptarmigan and black grouse | Obligation to remain on the paths with a tolerance of 20 m on both sides | Not always | | |
| | | | Biking | Yes, on wildlife and habitat | There are specific routes where you can ride your bike | Not always | | |
| | | | Hiking | Yes, on weekends, in all seasons, there could be more than 400 people; disturb on wildlife and habitat | Obligation to remain on the paths | Not always | | |
| | | | Overflight (paragliding, glider, drones) | Yes, on Birds and Mammals | Forbidden | Not always | | |
| NPB | Bettina Spornbauer | 19/05/25 | Biking, biking, rock climbing | No data available | Identification disturbance-free areas for black grouse | | | |
| | | | Paragliding | No | Agreement with paragliding associations to stay at least 500 m away from the nest | | | |
| | | | Dogs | Yes, on wildlife | It is mandatory to keep them on a leash | Not always | | |
| | | | Camping | Yes, especially on habitat | Forbidden | Not always | | |

| APA | Expert | Interview date | NBA/Other activities | Disturbance on animal/habitat | Solution | Respect | To do | Notes |
|-----|-----------------|----------------|--------------------------|--|-----------------------------------|---------|--|---|
| SNP | Fadri Bott | 05/06/25 | Hiking | No | Obligation to remain on the paths | Yes | | It is the only permitted activity, there are some areas from where you can see the animals, red deer in particular, without disturbing them; 80-90.000 tourists during the summer, in winter the park is closed |
| | | | Snowshoeing | No | Forbidden | Yes | | |
| | | | Ski mountaineering | No | Forbidden | Yes | | |
| | | | Biking | No | Forbidden | Yes | | |
| | | | Dogs | No | Forbidden | Yes | | |
| | | | Paragliding | No | Forbidden | Yes | | |
| | | | Camping | No | Forbidden | Yes | | |
| PNE | Juliette Frigot | 02/07/25 | Hiking | Yes, noise pollution, barbecue, chasing the ibex to take a picture | | | | It is the 80% of the NBA in the National Park |
| | | | Hiking on wet areas | It seems that they are not disturbed | | | European project to increase the protection of these areas | |
| | | | Swimming in alpine lakes | Yes, to water quality: presence of solar cream and microplastics | | | | |
| | | | Rock climbing | Yes, on golden eagle and bearded vulture | | | | |
| | | | Ski mountaineering | Yes, to black grouse | | | Definition of disturbance-free areas | |
| | | | Snowshoeing | Yes, to black grouse | | | Definition of disturbance-free areas | |
| | | | Nature photography | Yes, on golden eagle and bearded vulture | | | | |
| | | | Paragliding | Yes, on golden eagle and bearded vulture | Forbidden | | | |
| | | | Camping | Vegetation disturbance is being evaluated | | | Verify | |
| | | | Social media | Yes | | | Verify what posted on the social and have the possibility to correct information, when necessary | |
| | | | General | | | | | PNE is monitoring the tourist presence with Eco counter, Car traffic counter, camera traps (use of AI to analysing the pictures), big data, visitor centres, Strava |

| APA | Expert | Interview date | NBA/Other activities | Disturbance on animal/habitat | Solution | Respect | To do | Notes |
|--------|------------------|----------------|----------------------|--|--|---|-------|---|
| ASTERS | Laureline Durand | 15/07/25 | Paragliding | Yes, on golden eagle and bearded vulture | Forbidden | Not always | | |
| | | | Drones | Yes, on golden eagle, bearded vulture, chamois, ibex, marmot | Forbidden | Not always | | |
| | | | Hiking | Yes, people try to get close to ibex, especially males, and marmots, which can sometimes bite them. | Forbidden | Not always | | |
| | | | Biking | Yes, they scare ibex | Obligation to remain on the paths | Not always | | |
| | | | Camping | Yes, especially for garbage (especially toilet paper); people wash dishes in Alpine lakes; there are people who camp among sheep flocks because they are scared of wolves. | Since two years it is forbidden swimming in the lake and camping near them | Not always also because in the natural reserves there are different rules | | |
| | | | Ski mountaineering | Yes | Disturbance-free areas since 10 years | Not always | | |
| | | | Snowshoeing | Yes | Disturbance-free areas since 10 years | Not always | | |
| | | | Dogs | Yes, to wildlife, sheep and guard dogs | They can enter only with leash | Not always | | |
| | | | General | | | | | Increased attendance after the pandemic, many people have never been to the mountains, know nothing about it, and still want to do it: we need to find a way to talk to them, there are different laws in the different reserves, they don't know about safety, they are totally unprepared. They've always been there, but in recent years they've increased due to the pandemic and social media. |

Interreg



Co-funded by
the European Union

Alpine Space

LiveAlpsNature



outdooractive

The LiveAlpsNature project (ASP0500464) is co-funded by the European Union through the Interreg Alpine Space programme.

