



Parc national
des Ecrins



Parc national
du Mercantour



Parco naturale
Alpi Marittime



GEOTREK, an opensource application to manage and promote hiking



Summary

- **Context and project presentation**
- **Presentation of tools to manage and promote trails :
Geotrek and Ecrins Trekking**
- **Feedbacks, deployment and prospects**



The project

« A digital application to manage and promote hiking »

General aims :

- ✓ Qualify and promote an ecotourism offer hike
- ✓ Improve the management of trails network managed by the Park
- ✓ Educate the public & valuing scientific knowledge of the National Park
- ✓ Create partnerships with communities members of the National Park
- ✓ Support economic activities of the territory (accommodation, ...)

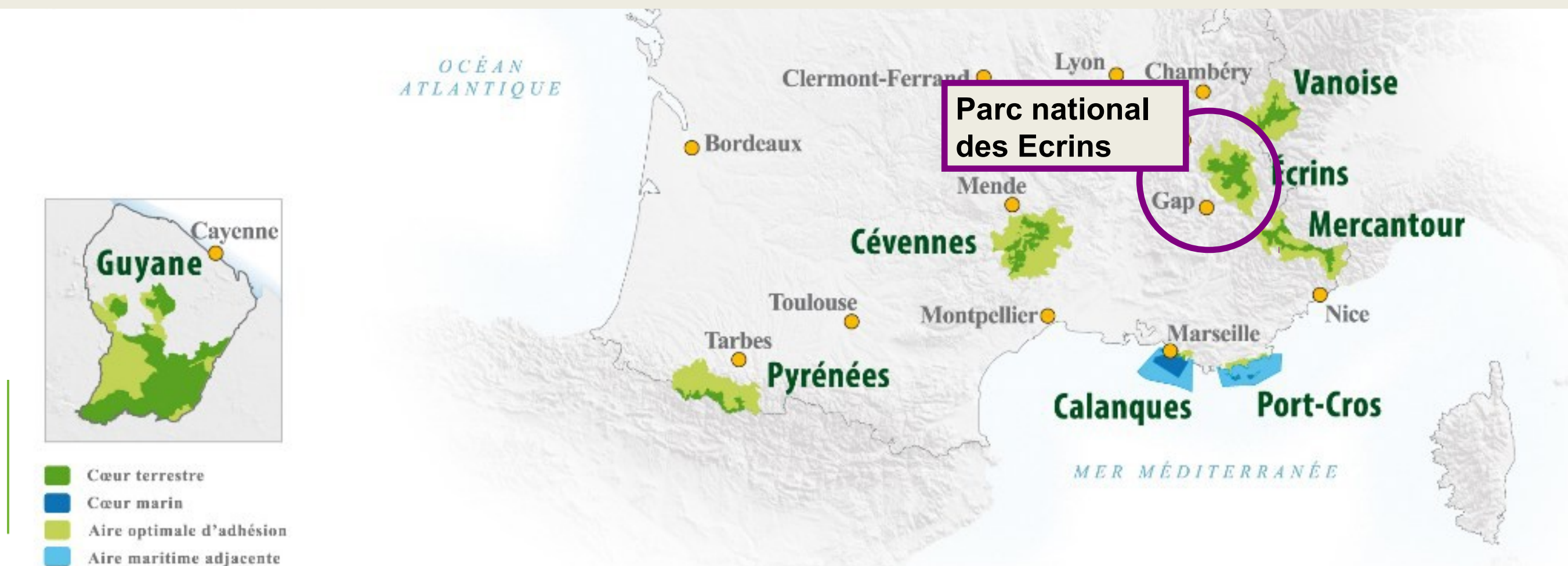


One of 10 French National Parks

- > Protecting biodiversity
- > Knowing the heritages
- > Informing and educating public
- > Supporting friendly economic activities



4 Parks members of the European Charter of Sustainable Tourism (CETD)



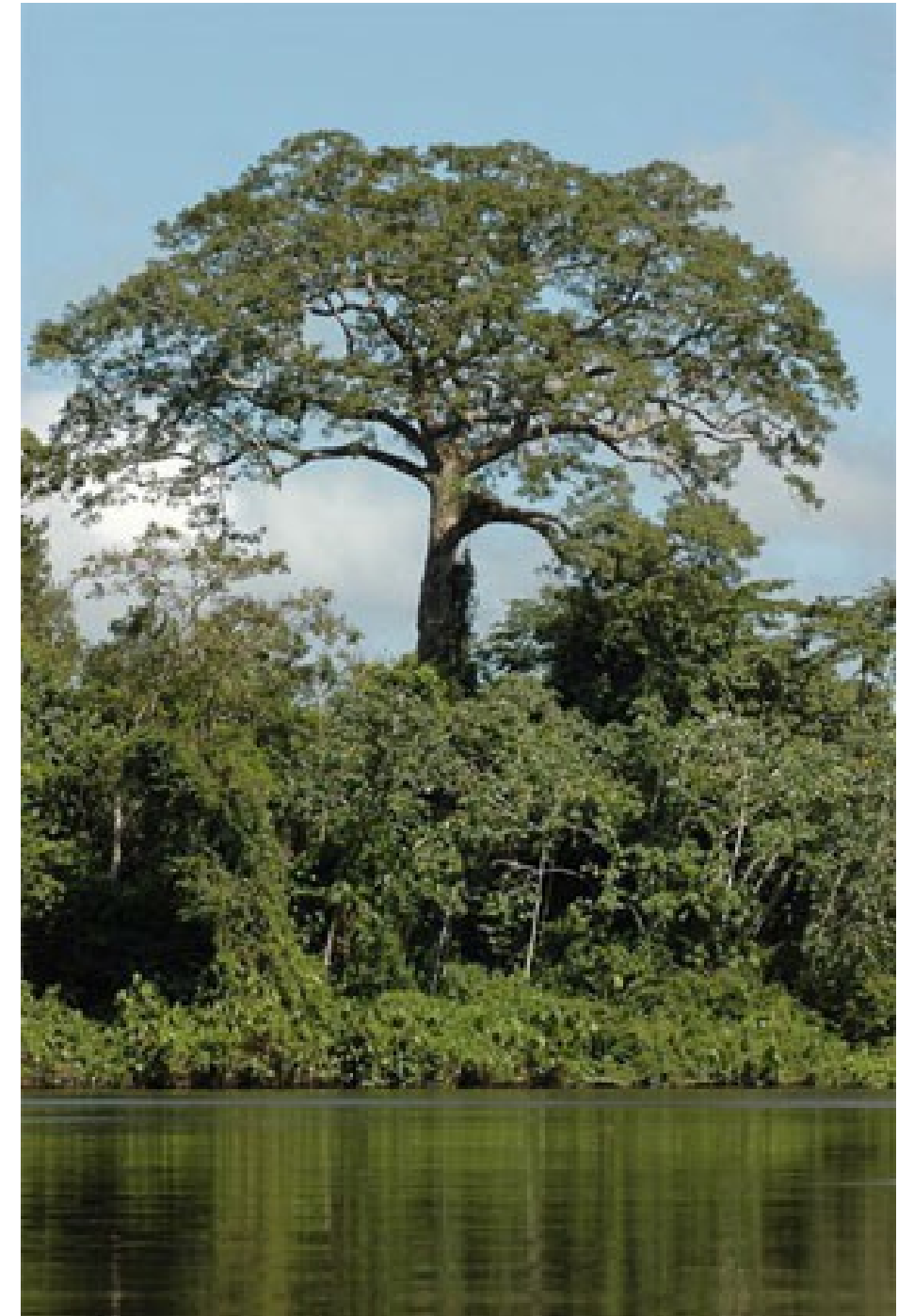
Few images of French national parks



Few images of French national parks



Few images of French national parks





The Ecrins National park :

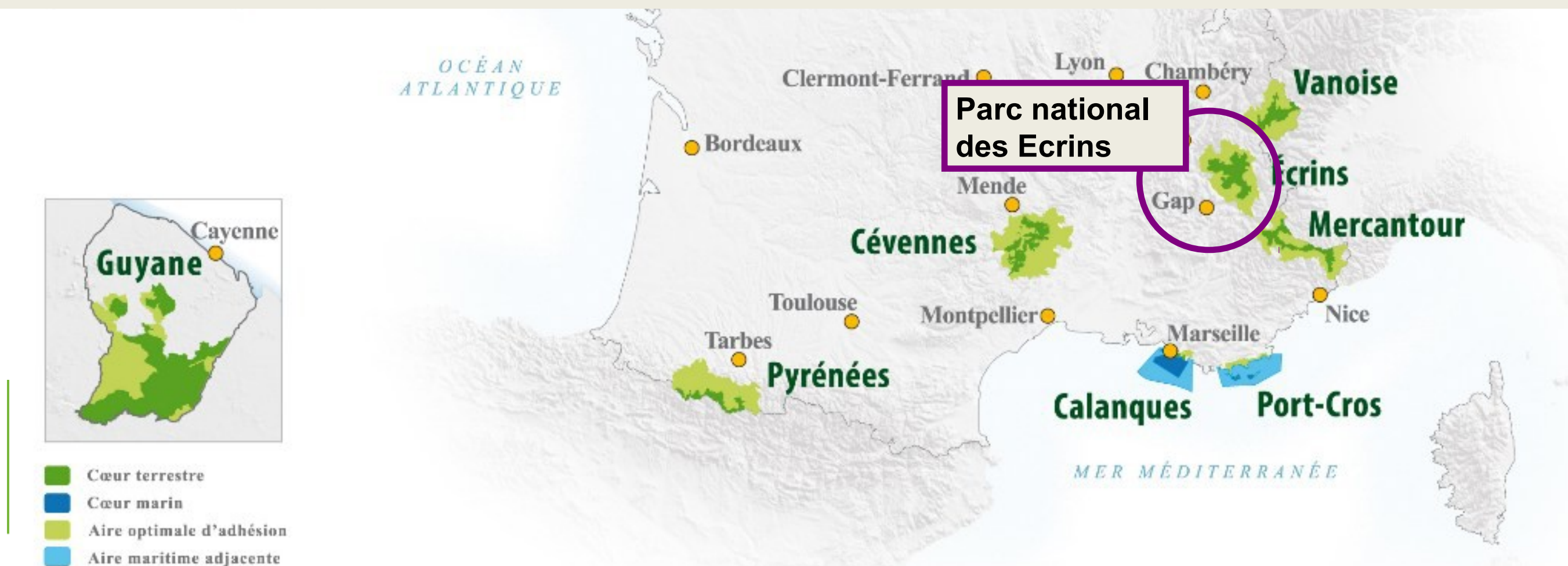
Created in 1973

46 municipalities members since 2013 / 30 000 inhabitants

Departments of Isère and Hautes-Alpes

The highest summit is 4 102 meters - La Barre des Écrins

Member of the European Charter of Sustainable Tourism (CETD)



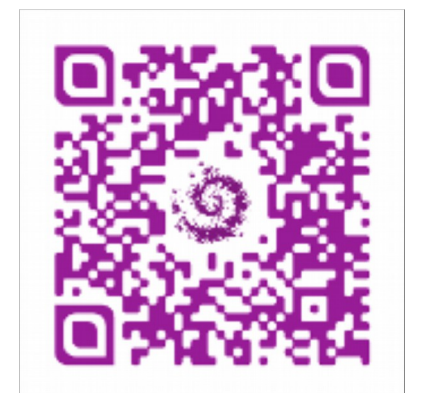
Some statistics about hiking in the Ecrins

Trails network from « the heart » of the Ecrins National Park :

- > 750 km of trails
- > 146 gateways
- > + 900 panels
- > 14 pedestrians counters

Frequotation of « the heart » of the Park (2011 study):

- Hikers : 280 900 (- 22% in 5 years)
- Visitors to the entrances of « the heart » : 737 700 (+ 6% in 5 years)
- The Park Houses Visitors: 166 385





Project timeline

2012 :

- > Conceptualizing a « **digital opensource application** »
- > **Cooperation** and **mutualization** technical and financial resources :



Since 2013:

- > **Ecrins trekking** : over **100 treks** and **1 000 heritages** points of interest
- > A **mobile App**
- > **Geotrek** is deployed by **18 structures** with **new developments / functionalities**

An European financial support from the FEDER Massif Alpin :





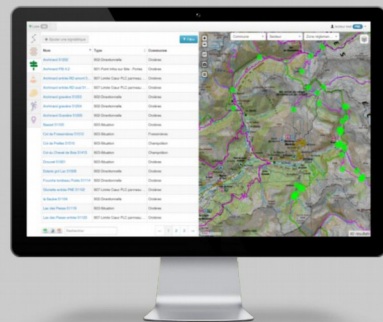
GEOTREK, manage and promote hiking

An opensource tool made by the National Park Ecrins, the Mercantour National Park, the Park and Maritime Alps Makina Corpus. Downloadable freely on Geotrek.fr

GEOTREK-Admin

> *Input tool and database*

MANAGE
CREATE
EDIT
EXPORT



- Paths
- Trails
- Statutes
- Infrastructures
- Signage
- Interventions
- Treks
- Tourist services
- Heritages POIs
- Notifications

PUBLICATION

PUBLICATION

*Touristic datas
Information
Systems
(Sitra, etc.)*



GEOTREK-Hiking

> *Web portal promoting the offer*

SEARCH
DISCOVER
PRINT
EXPORT



- Treks
- Heritages
- Pics
- Tourism

GEOTREK-Mobile app

> *Mobile app promoting the offer*

SEARCH
LOCATE
DISCOVER
DOWNLOAD



- Treks
- Heritages
- Pics
- GPS

Geotrek and Rando-Ecrins Manage and promote online hiking

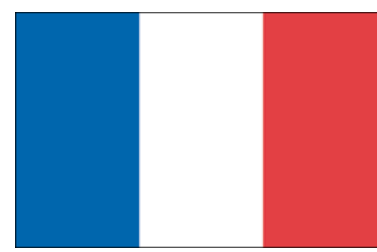


GEOTREK, a free and collaborative project

Open source licences : the applications are free to download on GitHub

Generic developments : adaptation and settings to the uses and users

Multilingual approach :



"Digital Ecosystems"

- > Importing external tourist flow data : information systems (SITRA, ...)
- > Creating Data export flow to other platforms (Cirkwi, IGN, etc.)
- > Experimentation on transport and mobility : AlpesInfo.net

Liste 109

camille.monchicourt PNE

+ Ajouter un tronçon

Gestion foncière

Filtre

Nom	Réseaux	Enjeu d'entretien	Sentier
tronçon 2251	Schéma de Sentiers du PNE	Aucun(e)	40701
tronçon 2252	Schéma de Sentiers du PNE,...	Aucun(e)	40603
tronçon 2253	Schéma de Sentiers du PNE,...	Aucun(e)	40701
tronçon 2255	Schéma de Sentiers du PNE	Aucun(e)	40702
tronçon 2263	Schéma de Sentiers du PNE	Aucun(e)	40601
tronçon 2265	Schéma de Sentiers du PNE,...	Aucun(e)	40603
tronçon 2294	Schéma de Sentiers du PNE	Aucun(e)	50405
tronçon 2302	Schéma de Sentiers du PNE	Aucun(e)	60304
tronçon 2305	Schéma de Sentiers du PNE	Aucun(e)	50407
tronçon 2306	Schéma de Sentiers du PNE	Aucun(e)	50604
tronçon 2307	Schéma de Sentiers du PNE	Aucun(e)	50302
tronçon 2308	Schéma de Sentiers du PNE	Aucun(e)	50104
tronçon 2310	Schéma de Sentiers du PNE	Aucun(e)	50107
tronçon 2330	Schéma de Sentiers du PNE	Aucun(e)	40602

Rechercher

← 4 5 6 7 8 →

109 résultats

> *Treks Module*

[illegible]

Dynamic segmentation

Ecrins Trekking

> *Ecrins trekking Video*



Link to the video : <https://youtu.be/E6v644oaRgM>

Ecrins Trekking

> Home Page

<http://rando.ecrins-parcnational.fr/en/>

Parc national des Ecrins Ecrins trekking

0 Favorites Share

Survey To read The National Park Core zone rules Park houses Escorted outings Transport Shop

Difficulty: Very easy, Easy, Medium, Hard. Duration: 1/2, 1 day, > 2. Climb: < 300m, 600m, 1000m, > 1400m. Thematic: [Icons]. Uses: [Dropdown]. Route: [Dropdown]. Valleys: [Dropdown]. Municipalities: [Dropdown]. Reset

Search (Name, Valley ...)

73 Results

Pigeon loft loop in the cirque d...
Valgaudemar
Municipality : La Chapelle-en-Valgaudemar
5 h 15 - Climb 1047 m
Medium

Mountain pass by Côte Belle b...
Valbonnais
Municipality : Valjouffrey
4 h 30 - Climb 1057 m
Medium

Font Froide Mountain Pass
Valgaudemar
Municipality : La Motte-en-Champsaur
7 h - Climb 1486 m
Hard

This website is co-financed by the European Union through FEDER Massif Alpin.

Conception and credits - Legale notices - Coming in the National Park - Contacts - National Park website

UNION EUROPÉENNE l'Europe s'engage le Massif Alpin HAUTES ALPES C'est en isère

Ecrins Trekking

> Accommodations POIs

rando.ecrins-parcnational.fr/en/

Parc national des Ecrins Ecrins trekking

0 Favorites

Survey To read The National Park Core zone rules Park houses Escorted outings Transport

Difficulty: Very easy Easy Medium Hard Duration: 1/2 1 day > 2 Climb: < 300m 600m 1000m > 1400m Thematic: Uses: Route Valleys Municipalities

Search (Name, Valley ...)

73 Results

- Lovitel lake and the Clots refuge**
Oisans
Municipality : Mizoën
2 h 30 - Climb 500 m
Easy
- The mule path**
Briançonnais
Municipality : La Grave
3 h - Climb 508 m
Easy
- The Buffe valley**
Briançonnais
Municipality : La Grave
4 h - Climb 451 m
Medium

Collective lodging Les Melezes

Les Mèlèzes
Gîte à Villar d'Arène

In a high alpine village in the heart of the Ecrins National Park, the cottage is open all year. We welcome you in a warm and friendly atmosphere. Room accommodation 1 to 6 beds, night of the full pension.

[Website](#)
Contact: [06 79 89 21 40](tel:0679892140)

This website is co-financed by the European Union through FEDER Massif Alpin.

[Conception and credits](#) - [Legale notices](#) - [Coming in the National Park](#) - [Contacts](#) - [National Park website](#)

Logos: GEO trek, Europe's Massif Alpin, HAUTES ALPES, C'est en isère

Ecrins Trekking

> Trek Page

http://portail....rcnational.fr/

La légende Black - Black M

Zimbra: Réception (73)

Ecrins trekking - Pigeon lof...

←

→

rando.ecrins-parcnational.fr/en/pigeon-loft-loop-in-the-cirque-de-gioberney

g

rando ecrins

☆

📁

↓

🏠

☰

Z

Connexion à Zimbra C...

☐

espacesnaturels



Parc national
des Ecrins



Ecrins trekking

🏠

Survey

To read

The National Park

Core zone rules

Park houses

Escorted outings

Transport

Shop

0

Favorites

Share

←

Pigeon loft loop in the cirque de Gioberney

Departure : Globerney Carpark → Arrlval : Globerney Carpark

5H15

Medium

Loop

8.4 km

818 m

Uses

Thematic

🕒

🧑

🔄

📏

🏔

👣

🏠

🌳

🐎

🔊

Feedback

📌

Favorites

🔄

3D

🖨

Print

📍

GPX

🌐

KML

At the deepest point of the Valgaudemar valley, this itinerary offers exceptional points of view of the mythical summits and their glaciers. They are condensed mountains!

« The French Himalayas ». It is in these words that the great mountaineer Gaston Rébuffat described the Valgaudemar. valley What more can one say ? Here, the verticality of the slopes can be oppressive. The summits touch the sky and can give you vertigo. Towards them, you gaze upwards slowly in order to see where they end. Oppressive, vertical, austere... but so strong, wild and fragile at the same time. Simply beautiful !

Régis Jordana, park ranger at Valgaudemar



This trek is within park center, [please read access rules.](#)



+

-

🗲

📍

📷

On the way...

🏠

Châlet-hôtel in Giobern...

The construction of the chalet-hôtel at Gioberney started during the Second World War as part of a youth project. It enabled some young people the possibility of escaping obligatory work service in Germany (STO). The stones for the building were taken on the spot, cut and put together using cement mortar.



This website is co-financed by the European Union through FEDER Massif Alpin.

Conception and credits

-

Legale notices

-

Coming in the National Park

-

Contact

-

National Park website





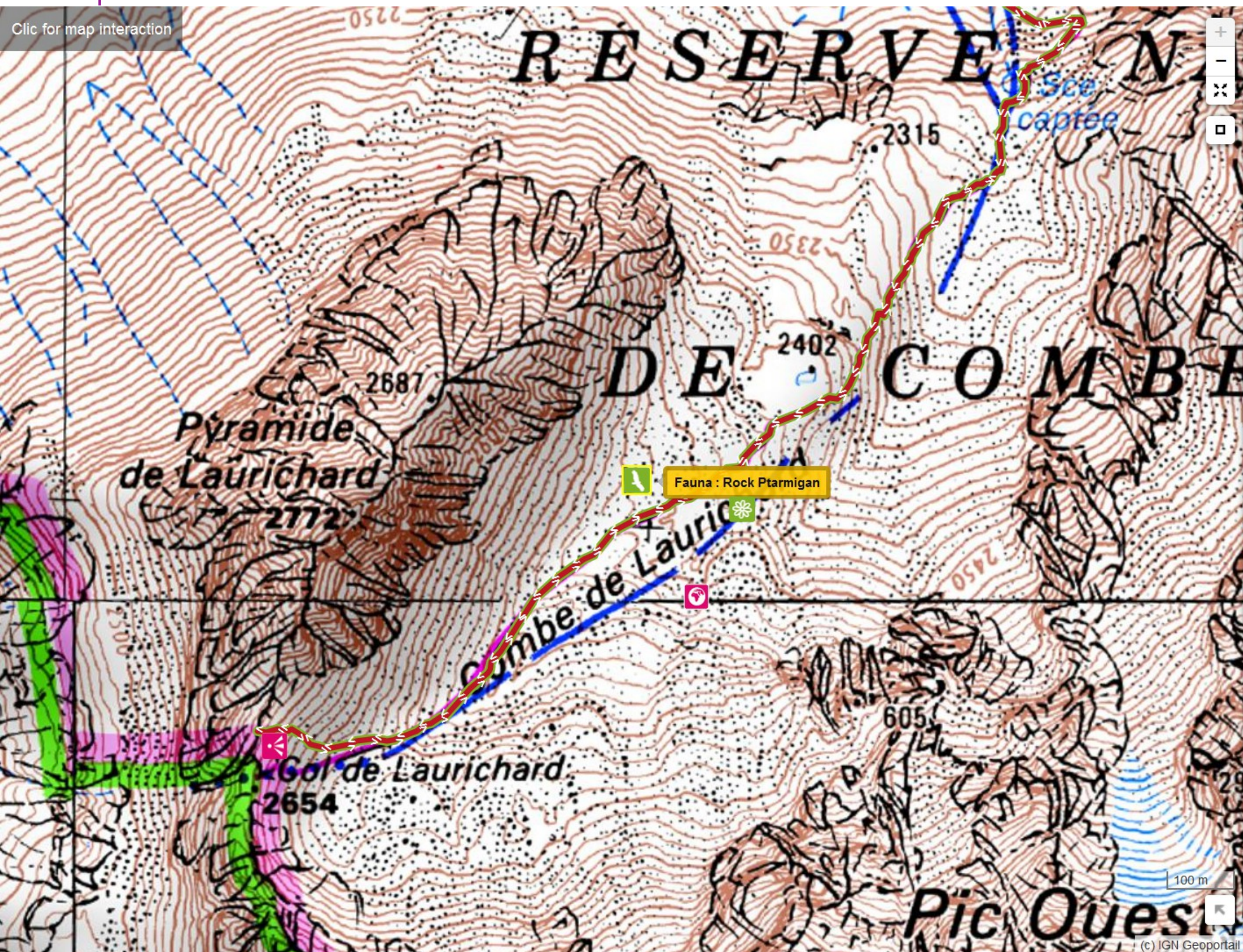




Ecrins Trekking

> *Heritages points of interests*

Clic for map interaction



RÉSERVE NATIONALE DE COMBE DE LAURICHARD

Pyramide de Laurichard 2772

Combe de Laurichard

Gol de Laurichard 2654

Pic Oues

Fauna : Rock Ptarmigan

Laurichard Mountain Pass

Rock Ptarmigan

The cold bottom of the Laurichard valley is where the Rock Ptarmigan lives (species that is a glacial relic). Its Latin name 'Lagopus' signifies "hare's foot": this species reproduces during the warm season in the valley. It is one of the ten species of bird to be protected in priority in the heart of the National Park. Take care to stay on the path to avoid disturbing their nests...

Lagopèdes alpins (Damien Combrisson - PNE)

The Laurichard mountain pass, at an altitude of 2654 m, offers a superb panorama over the Meije massif and the surrounding summits : le pic Gaspard, la pointe Nérot, le Bec de l'Homme,... In the South the Barre des Ecrins points its icy nose behind the Roche Faurio.

Les Cercs depuis le glacier de Laurichard (Mireille Coulon - PNE)

100 m

(c) IGN Geoportail

— | + Zoom automatique ↕

A Access

At Vallouise, follow the direction of Pelvoux. At Sarret hamlet, turn right in the direction of Eychauda up to Chambran car park (signposts at this site). Road closed in Winter.

P Advised parking

Car Park Chambran hamlet

i Transport

Station SNCF at L'Argentière-la-Bessée (L'Argentière-les-Ecrins) then bus or taxi to Pelvoux. No shuttle service to Chambran.

i Information desks

To check the practicability of the hiking paths and to know more about the National park, please visit us or call us at :

Vallouise Park house

Information, documentation, models, exhibitions, screenings, product sales and works of the Park. Guided tours for school, reservation required. The new Park House opened in Vallouise since June 1, and offers visitors an interactive permanent exhibition inviting to explore the area and its heritage. A temporary exhibition space will allow a renewed offer. Finally, the device is completed by an audiovisual room to organize screenings and conferences Free admission. All animations of the Park are free unless otherwise stated.

Tel : 04 92 23 58 08

<http://www.ecrins-parcnational.fr/> vallouise@ecrins-parcnational.fr

05290 Vallouise

Lat : 44.8464095564 Long : 6.48838936239

Powered by <http://geotrek.fr>



EYCHAUDA LAKE Vallouise - Pelvoux

Duration
5 h

Length
12.3 km

Trek ascent
945 m

Difficulty
Medium

Type
Return trip

Practice
By walk

Themes
Fauna
Lake and glacier
Pastoralism



Attribution: Point d'information sur le site de Chambran (Thierry Maillet - PNE)

A long valley where the sheep spread out, an ascent zig-zagging across a prairie then, hidden behind a cross cliff, the reward: the lake with milky waters. A beautiful journey!

"The winter had been long. At the beginning of July, the lake was still snowy but little by little the ice had melted, dislocated. In this beginning of August I went up saying to myself: right, there, it's finished, there's no more ice! But no! In the quietness of morning, icebergs were still floating, debonair. This lake certainly deserves its description as a glacial!"

Marie-Geneviève Nicolas, park ranger in Vallouise

This hike is at the heart of the national park > The national park is an unrestricted natural area but subjected to regulations which must be known by all visitors.



Ecrins Trekking

> *Dynamic 3D View*

Boucle du Pigeonnier dans le cirque du Gioberney

Plein écran

Vivre au rythme des brebis

Malgré ce relief austère, la vallée du Valgaudemar accueille depuis des siècles une activité pastorale intense qui rythme la vie des habitants du printemps aux premières neiges. Ca et là, vous découvrirez donc une cabane de berger sous le regard toujours étonné de ces brebis provenant d'élevages de la vallée. Les troupeaux sont constitués des races

Mode sky

Move the terrain using the mouse.

Zoom : **Mouse wheel**

Rotation : **Left click**

Move :

Vivre au rythme des brebis (1767m)

IGN Geoportail

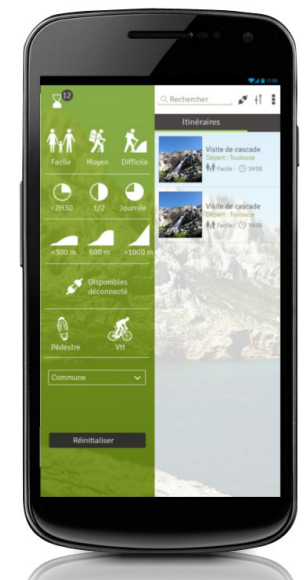
21

Ecrins Trekking APP

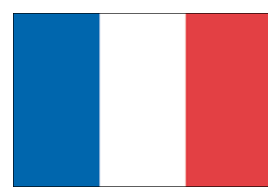
> *Mobile APP*



- **Select hikes** with the search component (level, ...) or the dynamic map
- **Embark detailed** pics and maps **by downloading** them one by one.
- Consult trekking sheets **without an Internet connection**
- **Navigate** on trails with **GPS**
- **Receive alerts** on nearby heritage trail **via GPS**



> Languages are automatically managed according to the language of the device when downloading



Ecrins Trekking APP

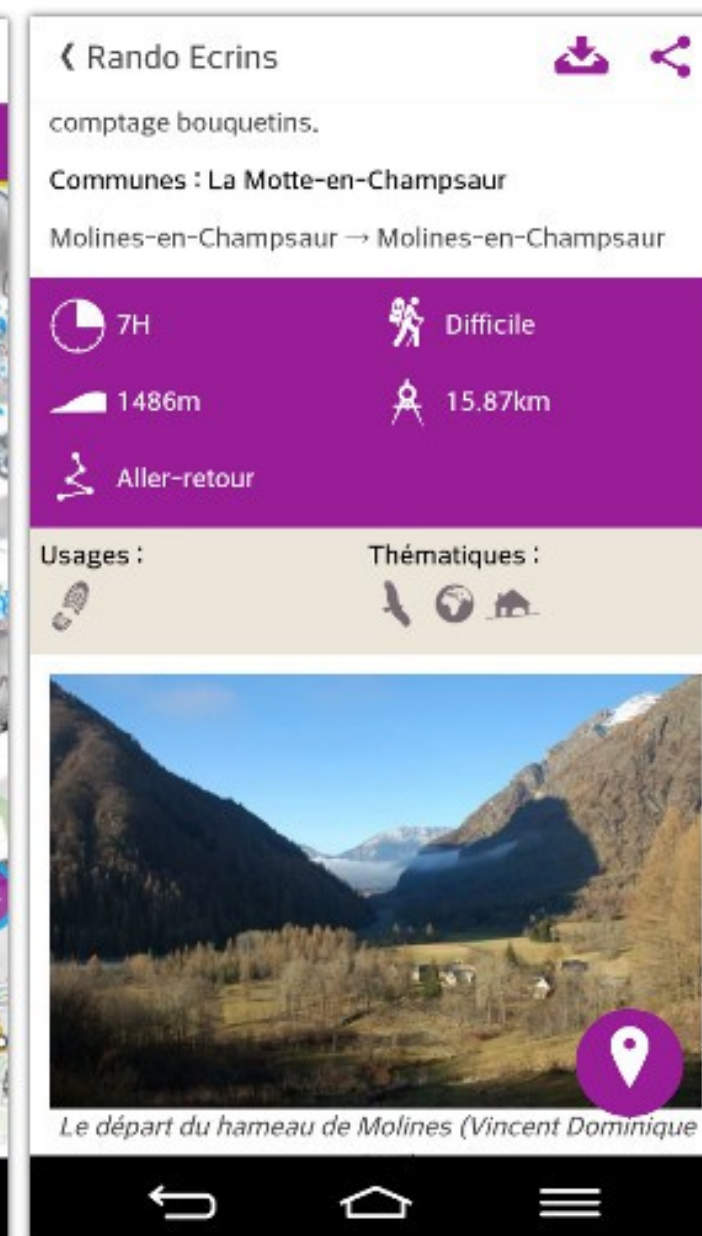
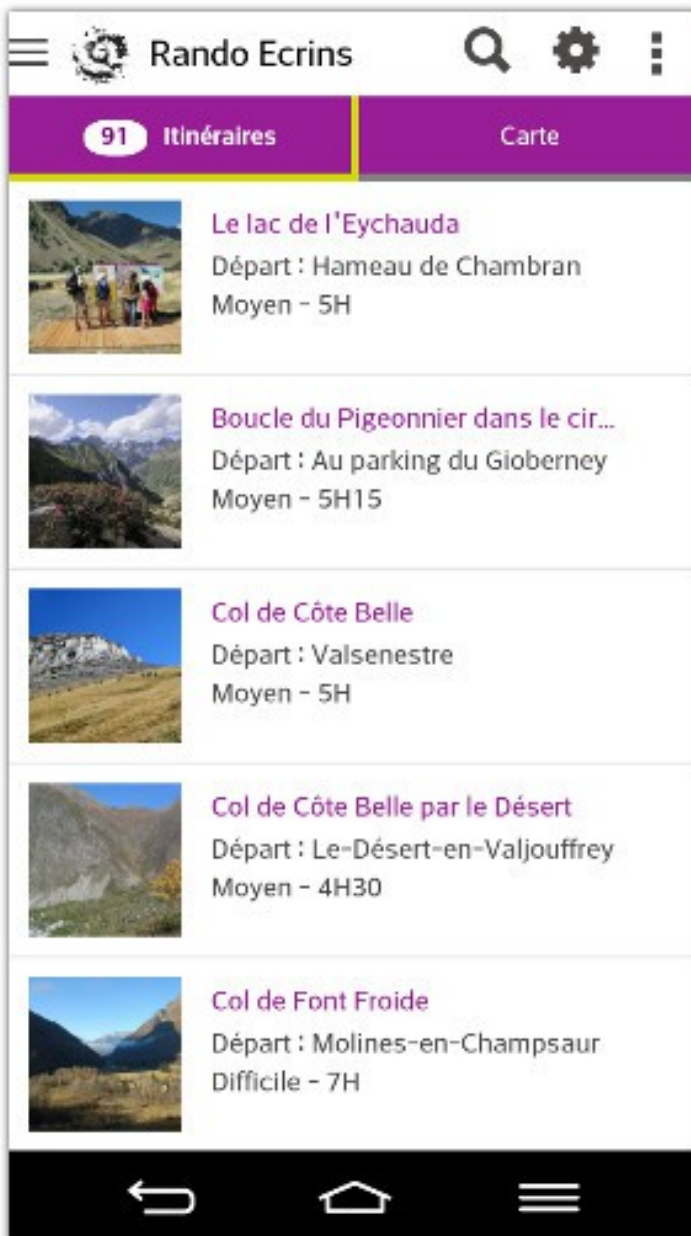


List

Search

Map

Trek



<https://play.google.com/store/apps/details?id=com.makinacorus.randoecrins>

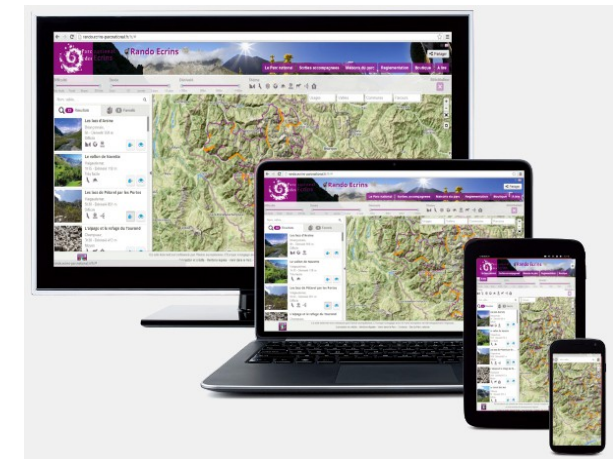
<https://itunes.apple.com/fr/app/rando-ecrins/id1006695571>

Geotrek and Rando-Ecrins Manage and promote online hiking



Some statistics of Rando Ecrins WEBSITE

- **107 treks are online** on Rando Ecrins
- **73 treks** translated into **English** and **Italian**
- **182 004 visitors** between July 2013 and August 2015
- **900 - 1200 connections per day** in summer 2015
- **78% of computers + 11% tablets + 11 % smartphone**



Google Analytics



Geotrek and Rando-Ecrins Manage and promote online hiking



Some statistics of MOBILE APP



- **3 871 downloads of the Mobile App**, between end of June and end of August 2015
- **200 - 300 connections per day**
- **9 pages by visit (on average)**
- **8:20 min per session (on average)**

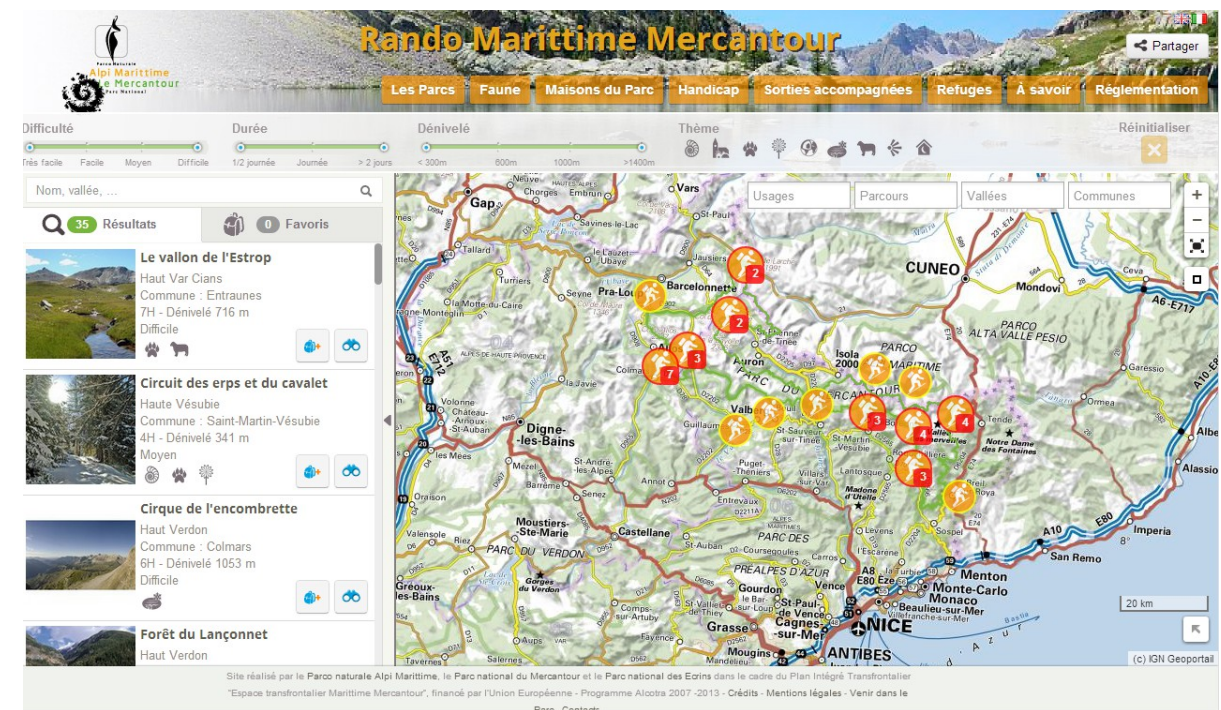


DEPLOYMENT - COLLABORATION



A project with 3 founders community ...

Free licence, generic and configurable Application



DEPLOYMENT - COLLABORATION



A community of project ... which will include more than 18 users structures in 2015



And another study the project ...



FORMULAS OF DEPLOYMENT

AUTONOMY

- Server
- Data (paths, MNT WMS)
- Web administration competency
- Spatial database competency
- WEB competency (hiking portal)

COACHING *

- Training
- Assistance

* *Service Company*

BY COMPANY

- Accommodation on web server
- Installation
- Data Integration
- Customization
- Maintenance
- Backup

The screenshot shows a web browser displaying the Geotrek documentation page for installation. The URL in the address bar is `geotrek.readthedocs.org/en/latest/installation.html`. The page has a blue header with the Geotrek logo and a search bar. A left sidebar contains a navigation menu with links to various sections: INSTALLATION, CONFIGURATION, LOADING DATA, MAINTENANCE, ADVANCED CONFIGURATION, TROUBLESHOOTING, FREQUENTLY ASKED QUESTIONS, USER MANUAL, DESIGN, and DEVELOPMENT. The main content area is titled 'INSTALLATION' and includes a sub-header 'Docs » INSTALLATION' and a link to 'Edit on GitHub'. The text explains that the instructions are for production and refers to a dedicated procedure for developers. It lists requirements: Ubuntu Server 12.04 Precise Pangolin, 1 Go RAM, and 10 Go disk space. It also provides the installation commands: `curl https://raw.githubusercontent.com/makinacorp/Geotrek/master/install.sh > install.sh`, `chmod +x install.sh`, and `./install.sh`.

Geotrek and Rando-Ecrins Manage and promote online hiking

> Guadeloupe National Park web portal

The screenshot shows the 'Rando Guadeloupe' web portal. The header features the site logo and navigation links: Accueil, Réglementation, À savoir, Conseils, Sorties accompagnées, and Accessibilité. Below the header are filters for Difficulty (Très facile, Facile, Moyen, Difficile), Duration (< 2H, 2-4H, > 4H), and Elevation (< 300m, 600m, > 1000m). A search bar on the left shows '20 Résultats' and '0 Favoris'. The main map displays Guadeloupe with several hiking trails marked by icons (e.g., 3, 2, 4). The left sidebar lists three trails: 'boucle des Etangs' (Sud Basse-Terre, 6H, 509m), 'boucle Galion - Armistice' (Sud Basse-Terre, 3H30, 413m), and 'Cascade de la Ravine Paradis' (Sud Basse-Terre). The footer includes logos for Geotrek and the European Union, and text stating the project was initially cofinanced by the European Union.

Geotrek and Rando-Ecrins Manage and promote online hiking

> Amazonian Guyana national park web portal

http://rando.parc-amazonien-guyane.eu/fr/ Accueil - Espaces-Naturels Zimbra: Résultats de recherche Donner » LibreOffice rando.parc-amazonien-guy...

Fichier Edition Affichage Favoris Outils ?

Bien... T http... Oues... Port... Mona... Mona... Le D... Au Audi... Prov... Rugb... Mont... Accu... Rech... Page... Parc... Artm...

Partager

Comment venir Destination Saül Visiter le maroni Tourisme et handicap

Difficulté Facile Moyen Difficile Layon Durée 1/2 1 jour > 2 Dénivelé < 300m 600m > 1000m Thème Réinitialiser

Nom, vallée, ... 9 Résultats 0 Favoris

Belvédère
Délégation territoriale du centre
Commune : Saül
1H - Dénivelé 96 m
Facile

Grand bœuf mort
Délégation territoriale du centre
Commune : Saül
6H - Dénivelé 406 m
Moyen

Gros arbres

PARC AMAZONIEN DE GUYANE
Montagne Continent
Zone libre adhésion

Usages Parcours Vallées Communes

10 km

(c) IGN Geoportail

Site réalisé par le Parc amazonien de Guyane. Développé avec Geotrek, cofinancé par l'Union européenne pour les Parcs nationaux des Ecrins, du Mercantour et Alpi Maritime.

Conception et crédits - Contacts - Site du Parc national

Geotrek and **Rando-Ecrins** Manage and promote online hiking

> Regional Parks of Provence-Alpes-Cotes d'Azur

Découvrir les Parcs naturels régionaux
de la Région Provence-Alpes Côte d'Azur

À pied, à velo, à VTT, à cheval

Découvrir toutes les randonnées



Geotrek and **Rando-Ecrins** Manage and promote online hiking

> Regional Park of Grands Causses

The screenshot displays the website for the Regional Park of Grands Causses in southern Aveyron. The header features the park's logo and navigation links: A Savoir, PNRGC, UNESCO, Sorties accompagnées, Idées séjours, and Votre Avis. A 'Partager' button is also present. Below the header, there are filters for Difficulty (Très facile, Moyen), Duration (1/2, 1 jour, > 2), and Elevation (Dénivelé: < 300m, 600m, > 1000m). A 'Thème' section includes icons for Usages, Parours, Destinations, and Communes. A search bar on the left shows '2 Résultats' and '0 Favoris'. Two trails are listed: 'Le dolmen de Tiergues' (Roquefort - St-Affricain - Rougiers, 4H, Dénivelé 420 m, Moyen) and 'Sentier du Menhir' (Roquefort - St-Affricain - Rougiers, 1H30, Dénivelé 122 m, Très facile). The main map area shows a topographic map of the region with various locations labeled, including Tiergues, Roquefort-sur-Soulzon, and St-Affrique. A red line highlights a specific hiking route. The footer includes a statement about funding by the European Union and the Midi-Pyrénées region, along with logos for the Région Midi-Pyrénées, the European Union, and the 'Europe s'engage' initiative.

Parc naturel régional des Grands Causses

RANDO GRANDS CAUSSES en sud Aveyron

A Savoir PNRGC UNESCO Sorties accompagnées Idées séjours Votre Avis

Partager

Difficulté: Très facile, Moyen; Durée: 1/2, 1 jour, > 2; Dénivelé: < 300m, 600m, > 1000m; Thème: Usages, Parours, Destinations, Communes; Réinitialiser

Nom, vallée, ...

2 Résultats 0 Favoris

Le dolmen de Tiergues
Roquefort - St-Affricain - Rougiers
Commune : Saint-Affrique
4H - Dénivelé 420 m
Moyen

Sentier du Menhir
Roquefort - St-Affricain - Rougiers
Commune : Roquefort-sur-Soulzon
1H30 - Dénivelé 122 m
Très facile

ST-AFFRIQUE

© IGN Geoportail

Ce site Internet est cofinancé par l'Union européenne. L'Europe s'engage en Midi-Pyrénées avec le Fond européen de développement régional.

Conception et crédits - Mentions légales - Venir dans le Parc - Contacts - Site du Parc naturel régional

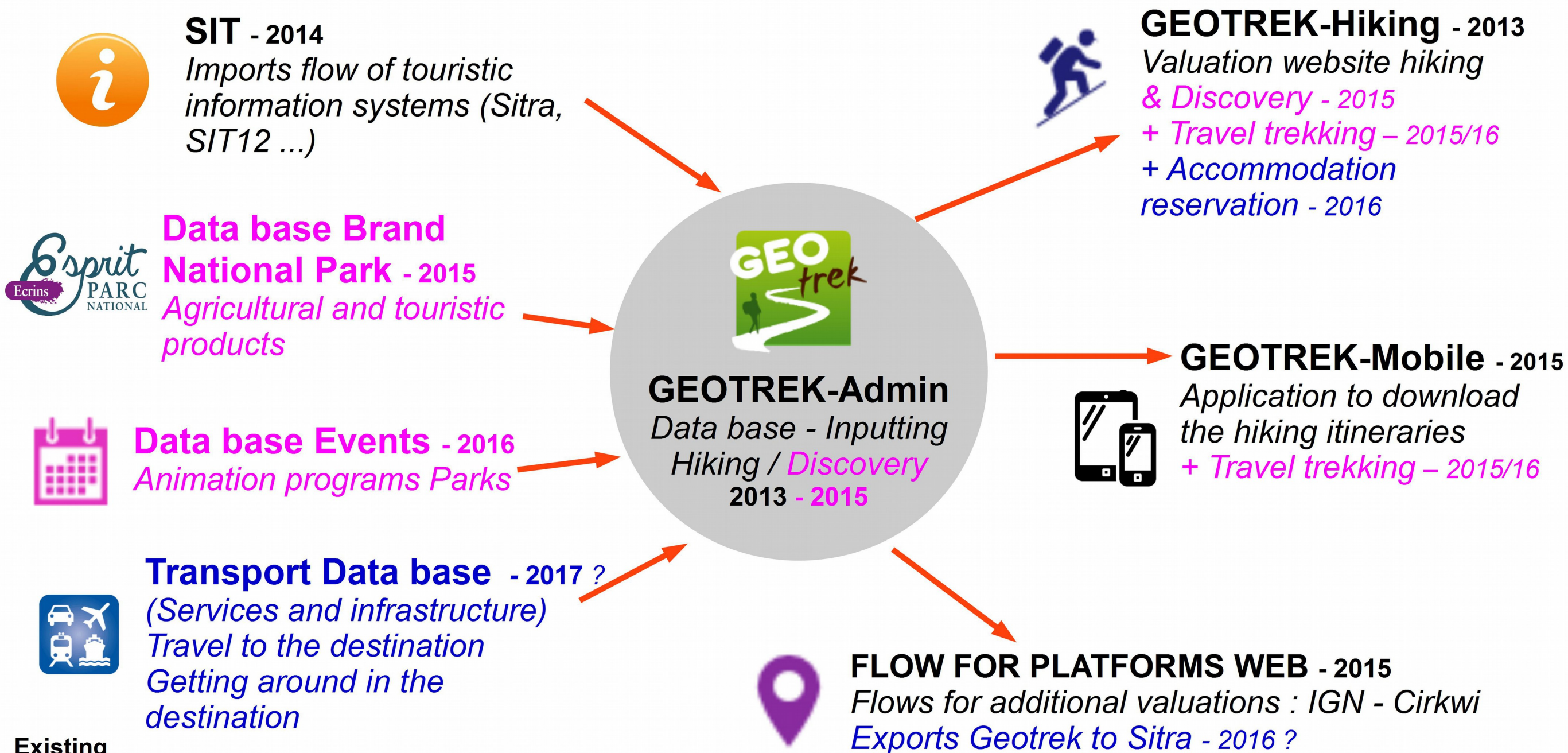
RÉGION MIDI-PYRÉNÉES

l'Europe s'engage en Midi-Pyrénées



GEOTREK, manage and valorise hiking and discover the territory

« A DIGITAL ECOSYSTEM IN EVOLUTION »



Existing
In progress
Under review
Direction of data flow

Geotrek and Rando-Ecrins Manage and promote online hiking

> A new web portal for the discovery, end of 2015



MENU



FR | EN

EN SAVOIR + MES FAVORIS ♥

En Cévennes, vivez l'esprit Parc national !

Rechercher dans les résultats...

Afficher + de critères ▼



La Bambouseraie de Prafrance

Généragues • Musée et exposition



Balade avec un âne

Généragues • Musée et exposition



Le Coupétadou

Généragues • Musée et exposition



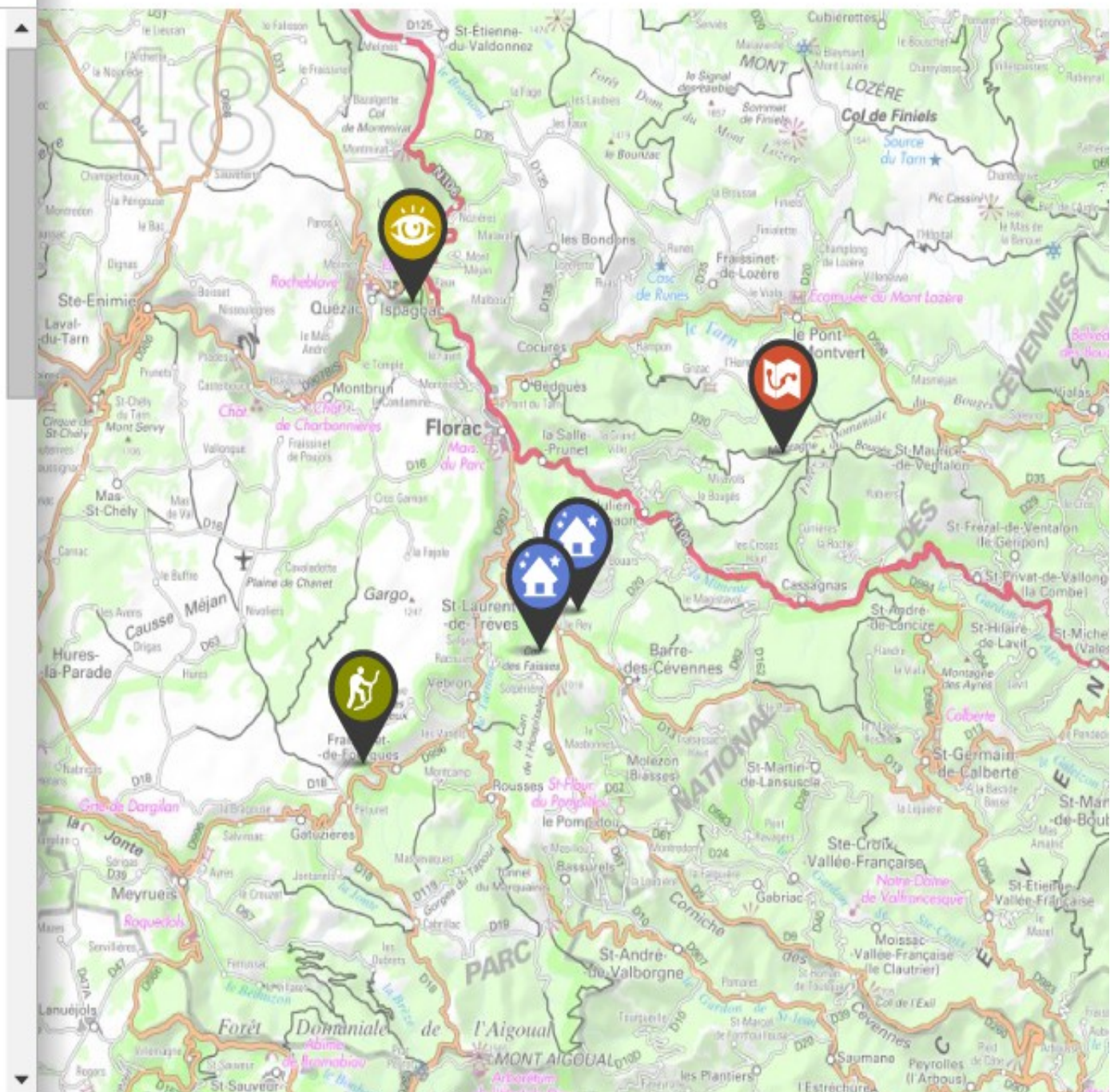
Barre-des-Cévennes

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Sur 2 lignes • 200m • Facile





32 expériences trouvées



Geotrek and Rando-Ecrins Manage and promote online hiking

> A new web portal for the discovery, end of 2015



FR | EN

EN SAVOIR + MES FAVORIS ♥

En Cévennes, vivez l'esprit Parc national !

MENU

FERMER X

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-  ☒ ÉVÉNEMENT TOURISTIQUE >
-  ☒ VISITES >
-  ☒ ACTIVITÉS DE PLEINE NATURE >
-  ☒ HEBERGEMENTS >
-  ☐ RESTAURANTS >
-  ☒ PRODUITS DU TERROIR >
-  ☒ SÉJOUR 100% ÉCOTOURISTIQUES >

Afficher + de critères ▼

32 expériences trouvées

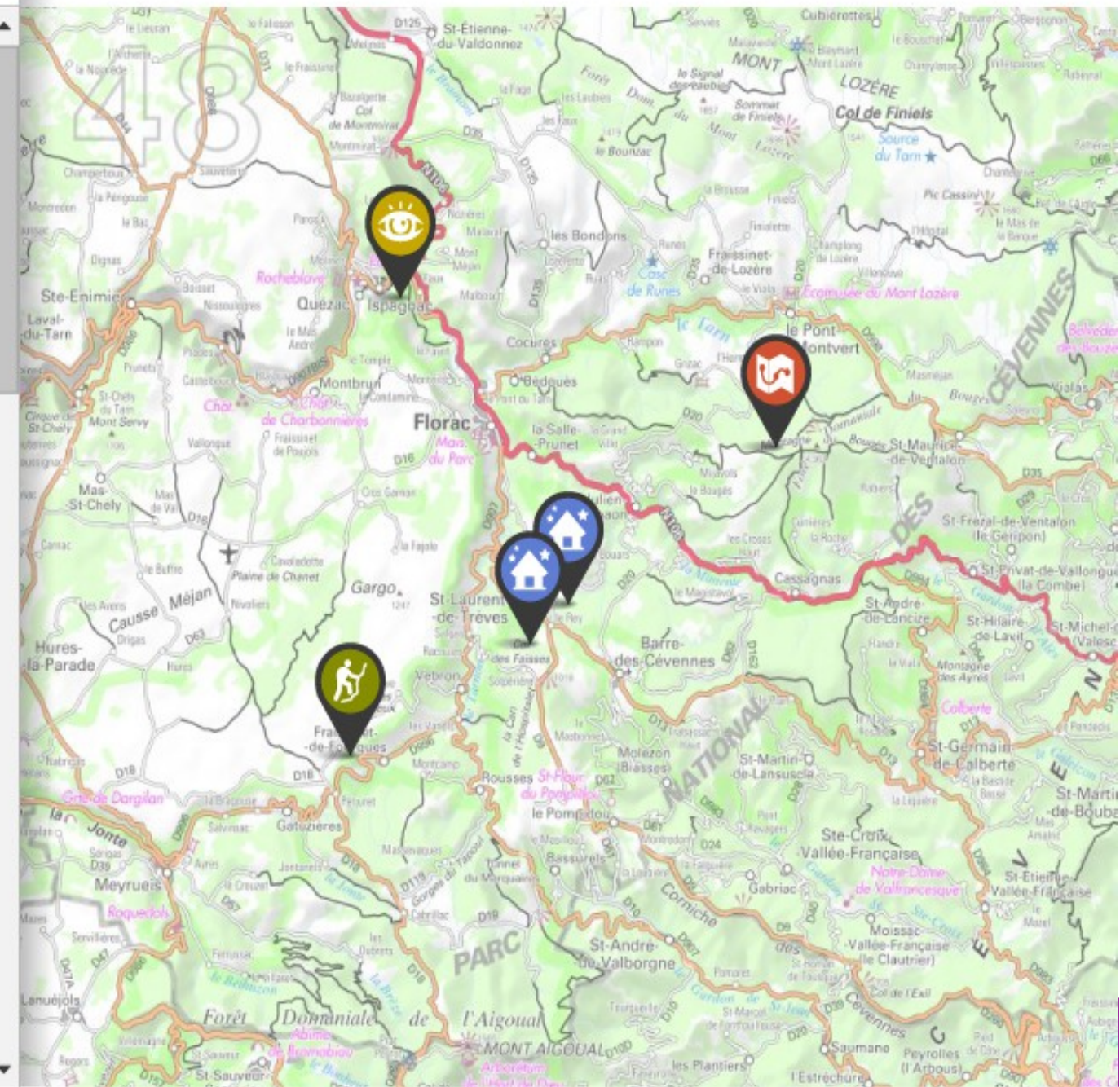


**Balade avec un âne**
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Thank you for your attention !



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