



Asian hornet (*Vespa velutina*)

A growing threat to honeybee population in the EU

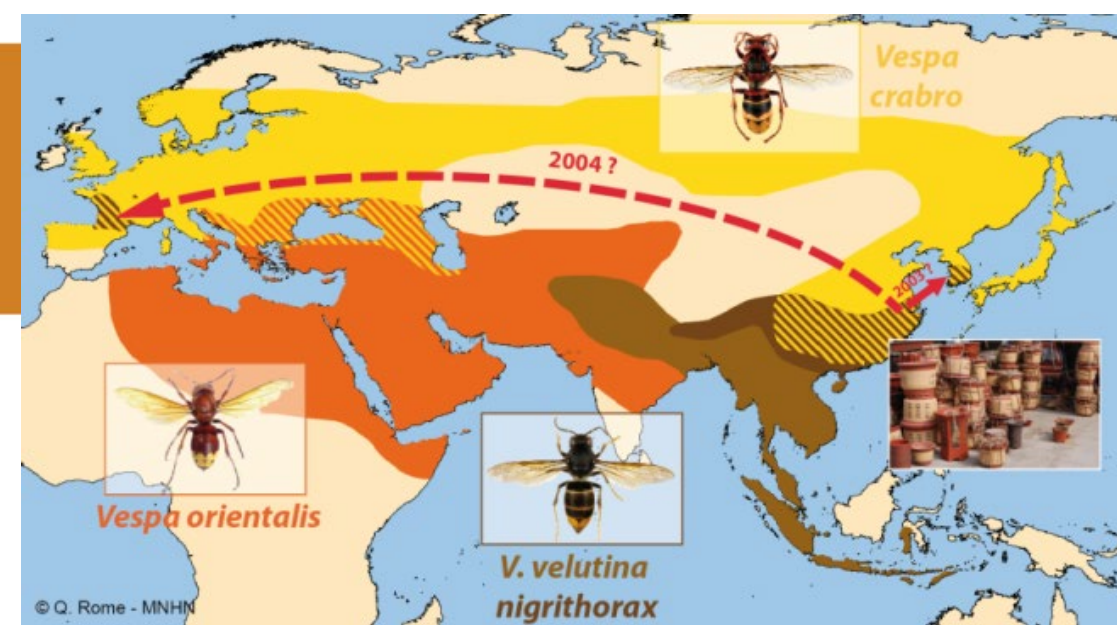
Stan. Jas

Copa-Cogeca Working Party on Honey

Civil Dialogue Group on Beekeeping

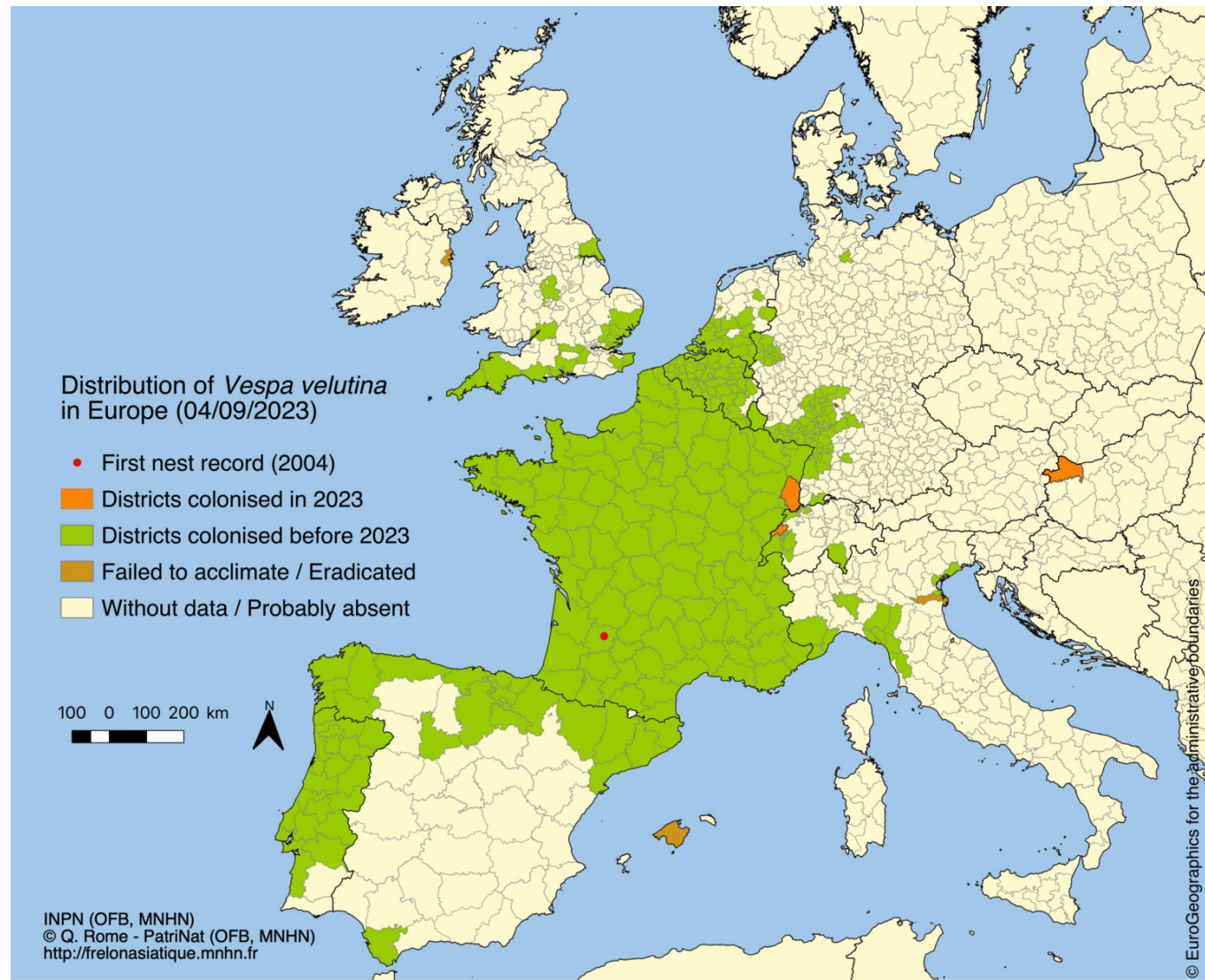
22/11/2023

Vespa velutina



- * A highly invasive hornet species originally from the South-East of Asia
- * Arrived in France around 2004
- * Rapid expansion in parts of Europe
- * A major threat to bee health and welfare with a potential to cause higher honeybee colony losses in major honey production regions of Europe
- * Broadly speaking an adverse impact upon biodiversity and related ecosystem services
- * A topic in CDG Beekeeping meetings since at least 2016

<https://frelonasiatique.mnhn.fr/>



Vespa velutina: Impact on beekeeping, agriculture and human health

- * **Costs of control measures**, mainly removal of the hornet nests: France €11,9 million (2020), Germany >€5 million (estimate from 2020), Spain €5 million (2021)
- * **Colony losses in beekeeping**: increased winter mortality of honeybee colonies from 20 to 80 % / beekeeper, lower honey yield and less foraging activity by bees due to the "ecology of fear"
- * **Costs for beekeeping**: loss of income estimated at €100 – 300 / colony in France (honey losses not included); Spain: affected beekeepers have to invest 20 % of their production value to combat *V. velutina*
- * **Ecological damage**: less insects and spiders, less pollination of plants
- * **Damage to farming**, especially viticulture (grape damage) and fruit production (damage to fruit, stings during the harvest)
- * **Risk to public health**: reports of increasing cases of anaphylactic shock and even death following stinging by *V. velutina* (Spain, Portugal)

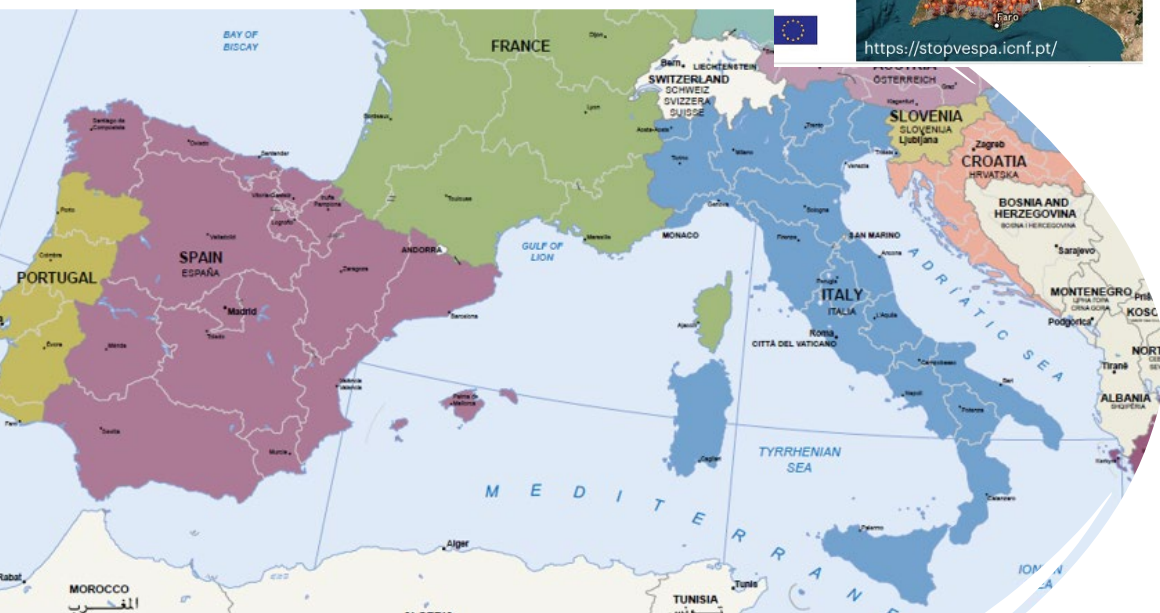
Based on paper written by Dr. Sebastian Spiewok, Deutscher Imkerbund, Germany (Nov. 2023)



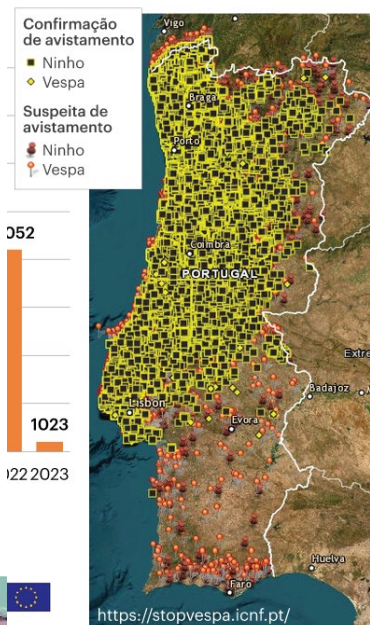


www.stopvelutina.it
www.vespavelutina.eu

<https://stopvespa.icnf.pt/>
<https://www.inia.pt/stopvespa>
<https://projects.inia.pt/gesvespa>
<https://projects.inia.pt/vigiavespa>



Mediterranean region - *V. velutina*



Italy

- ✳ Endemic in Liguria and north of Tuscany, spreading over other regions of northern Italy (Emilia-Romagna, Piedmont, Lombardy, Veneto), various action incl. research

Portugal

- ✳ Endemic in the north and central part, still spreading, explosion in 2023 (17.000 nests destroyed in 2022)
- ✳ A national Action Plan for Vigilance and Control of *V. velutina* since 2018 & GESVESPA project for a sustainable management of the pest (active vigilance with sentinel hives)
- ✳ Good Practice Manuals to combat *V. velutina* and destroy the nests

Spain

- ✳ The expansion continues at an **alarming rate** throughout Spain.
- ✳ **Measures for its control are being taken by the regional administrations** as the **Ministry of Agriculture has no Action Plan** in place.
- ✳ As *V. velutina* is not included in the Surveillance Programme, there is **no official data on its incidence, nor is there any assessment of losses**.
- ✳ The most common actions taken by the regional administrations are the **location and destruction of nests, which have increased by more than 50% in the last year**. In Galicia alone, 22,200 nests were destroyed in 2022. The forecast for 2023 is 60,000 destroyed nests.

Benelux - *V. velutina*

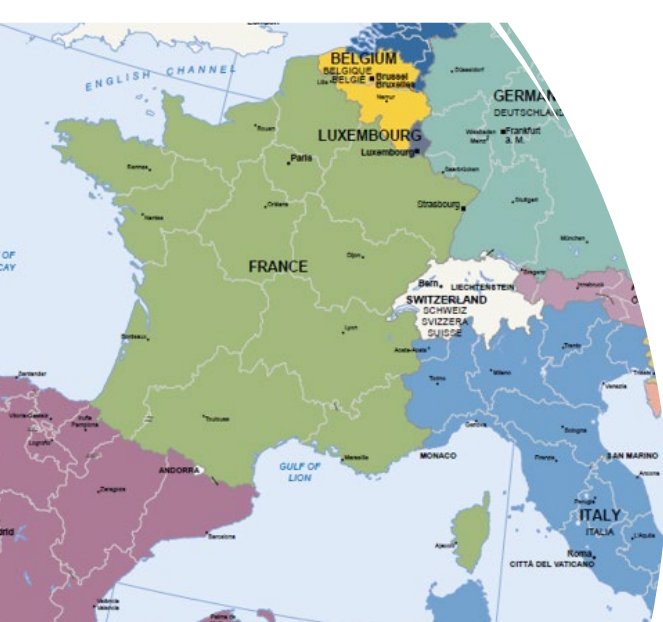
NL

- * In 2023, 233 nests in total spread throughout the Netherlands.
- * Task force group from the joint beekeeper organizations, fruit grower organization.
- * There is a reporting point organized by the government (internet, WhatsApp) where people must report a AH nest. However, the 12 provincial governments are the formally responsible for the control practices.
- * Dutch measures (more central coordination needed):
 1. Only maintain strong bee colonies in late summer and autumn. <https://waarneming.nl/go/vespa-velutina>
 2. A cheap and very effective control is to kill the first foraging young hornet queens in early spring (March).
 3. Make it difficult for the wasps to catch the honeybees by using round fly holes.
 4. Keeping in mind that bees will be able to change their approach behavior through learning.
 5. Cultivation and selection. Certain bee colonies defend themselves more or less well against intruders or attackers. The degree of defensiveness is innate or is enhanced by co-evolution.
 6. Control in early spring aimed purely at the solitary Asian hornet queens is by far the best approach.



France – *Vespa velutina*

- * Catastrophic situation for the beekeeping sector with various degree of damage **across the entire territory of France** (Marseille since 2021). The pressure of the hornet may vary locally depending on the year.
- * **National plan** to combat *V. velutina* with a slow and difficult implementation.
- * **Work by ITSAP** (Institut technique et scientifique de l'abeille et de la pollinisation), financed by InterApi (Interprofession du miel et des produits de la ruche): a summary paper of available knowledge on the attractivity and selectiveness of traps and bites used to young queens of *V. velutina* in spring.



MAI 2022

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PLAN NATIONAL DE LUTTE CONTRE LES FRELONS ASIATIQUES

CONTEXTE

En 2022, *Vespa velutina nigrithorax* est implanté sur l'ensemble du territoire français ; il est classé espèce exotique envahissante. *Vespa orientalis* est arrivé à Marseille fin septembre 2021. Les impacts des frelons sur les colonies d'abeilles sont importants depuis plusieurs années dans certaines régions, avec des périodes de stress

SCHEMA ORGANISATIONNEL DU PLAN



SEPTEMBRE 2023

ITSAP <https://itsap.asso.fr>

InterApi <https://interapi.fr>

INFORMATIONS

Les informations contenues dans cette fiche sont issues du rapport ITSAP, financé par InterApi, qui synthétise la bibliographie scientifique et technique ainsi que des résultats expérimentaux obtenus en 2022 par plusieurs partenaires : ITSAP, ADANA, ADAPI, ADA Occitanie, GDS07, GDS26 (Pointeau, 2023). Des résultats obtenus par l'ITSAP en 2023 sont également mentionnés.

OBJECTIF

Fiche de synthèse

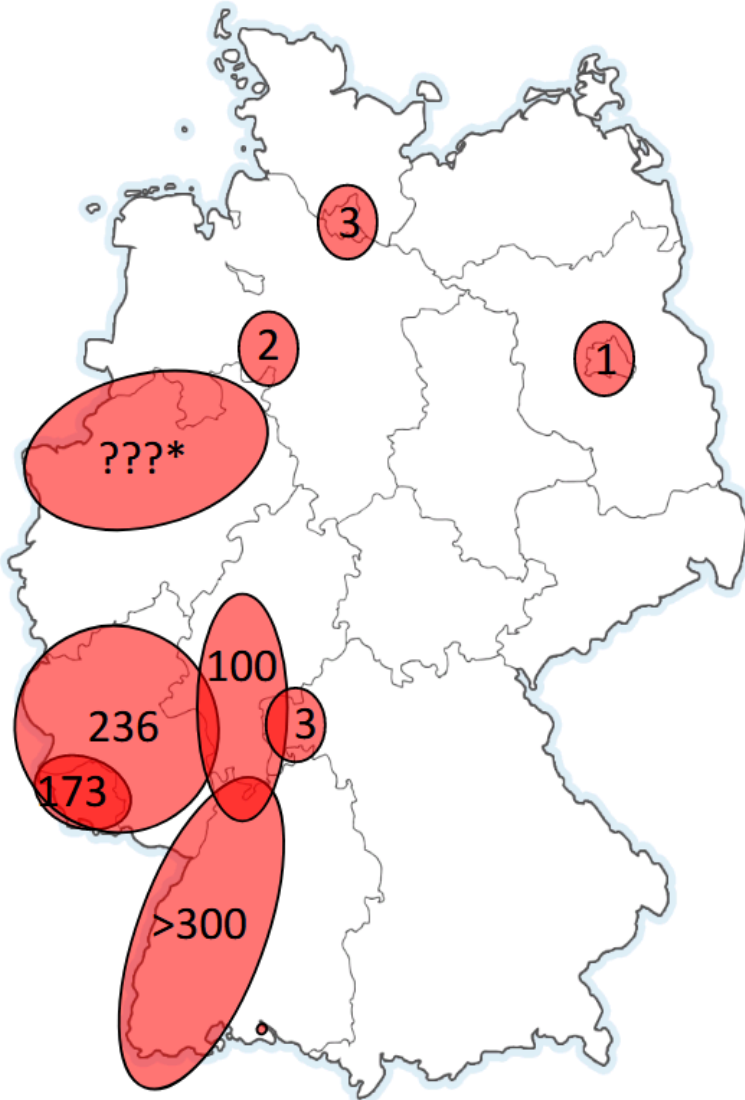
Frelon à pattes jaunes, *Vespa velutina*

PIÉGEAGE DES FONDATRICES AU PRINTEMPS : ATTRACTIVITÉ ET SÉLECTIVITÉ DE DISPOSITIFS DE PIÉGEAGE - DYNAMIQUE DE CAPTURE

Après l'accouplement en automne, les femelles sexuées du frelon à pattes jaunes hivernent sous l'écorce des arbres ou dans le sol. Au printemps, elles émergent et entament la phase critique d'initiation des nids durant laquelle chaque femelle fécondée peut fonder une nouvelle colonie. Pendant cette phase, les colonies sont encore petites et vulnérables et l'objectif de la fondatrice est de produire un effectif d'ouvrières efficaces le plus rapidement possible. Au cours d'une année, une fondatrice peut potentiellement produire plusieurs milliers d'ouvrières stériles générant une prédation sur les abeilles mellifères en fin d'été et en automne.

Germany – *V. velutina*

Distribution at the beginning of November 2023:



- * Detected first in 2014, the number of nests reported « exploded » in 2023 to reach more than 830
- * Due to the huge engagement of beekeepers in the finding and the removal of nests, no major damage has yet been caused to beekeepers.
- * Costs are currently incurred by individual beekeepers and associations when they purchase material for detecting and destroying nests.

Organisation of the fight

- * Major problem: each federal state is responsible for combating the invasive species itself.. No nationwide overview of the situation and no national control strategy of *V. velutina*.
- * The respective local authorities have different levels of commitment. Some authorities argue that *V. velutina* would be impossible to get rid of anyway, making control unnecessary. In principle, the authorities are not sufficiently equipped to deal with this problem, neither financially nor in terms of personnel.
- * Reporting of nests (internet portals or e-mail address only) -> finding the nests -> destruction of nests
- * No research until very recently. Use of traps not permitted. Beekeepers often not involved in decision -making



Central Europe – *V. velutina*

Austria

- * Not yet detected in 2023.
- * Responsibility is regulated at federal state level, although the responsibility in the individual federal states has not yet been conclusively clarified.
- * Actions planned: nationwide monitoring scheme, an existing platform could be expanded within the existing varroa mite warning service. Control measures could be coordinated and implemented by an agricultural service provider.

Czech republic

- * 1st nest found near Pilsen in autumn 2023. Reporting portal and apps developed.
- * Large-scale information campaign to beekeepers, naturalists, fire fighters...

Slovakia

- * In 2023, not detected yet, but probably is already in, or will arrive next year, due to the presence of first cases in neighboring Hungary
- * Implementation of educational campaigns by freely accessible booklets seminars, meetings - but the info is mainly on trapping on apiary level.
- * Unclear situation on who will be responsible for nests searching in the field and its removal. For the while are the firefighters willing to help, but the source of funding has not been decided, nor has enough staff been trained.

Hungary

- * First detection in 2023 at Kimle near the border with Slovakia and Austria.



Concrete actions to react to the threat

- * Legal basis: **Reg. (EU) 1143/2014** on Invasive Alien Species (IAS), Reg. 1141/2016 setting the list of IAS of Union concern
 - * *Vespa velutina* is an IAS of Union concern
- * Research and some other actions funded under various support schemes and a few CAP national strategic plans
 - * The research includes also sequencing *V. velutina* genome
- * Only a few examples of an effective control (Mallorca, UK)
- * Authorities in many cases unprepared to deal with the problem, when it appears in new locations
- * Dissemination of information, training
- * Private pest management companies & municipalities
- * In many cases the monitoring and trapping action is carried by beekeepers and citizens



Input from Germany – “it’s a mess”

The EU regulation on combating invasive species is simply being ignored in many places. In some cases, the issue is not being taken seriously by decision-makers nor local authorities.

There is a lack of:

- * an urgently needed nationwide or EU-wide concept,
- * exchange in border regions with neighbouring countries,
- * cross-national communication and thus an overview of the overall situation in the EU,
- * targeted monitoring,
- * funds and staff for the responsible authorities and appropriate training for staff,
- * training for pest controllers and advisors,
- * practical research on the topic,
- * legal certainty for the use of insecticides to remove nests,
- * involvement of beekeepers' representatives in decisions on hornet.



Copa-Cogeca call to the European Commission

Goal: manage future invasions and minimise the impact on native biodiversity, beekeeping and farming in areas with endemic presence of *V. velutina*

- Make sure that there is a **rigorous implementation of provisions in Reg. 1143/2014 by MS**
- Ensure widespread implementation of **mandatory monitoring** in all affected and bordering MS
- Ambiguity and full implementation of **Art. 18 and 19** of Reg. 1143/2014 by MS with regard to eradication and “non-eradicability”. There are no fixed criteria for when a population is considered “non-eradicable”.
- Implementation of a central management in each MS, coordinated by the EU, with associated finance
- More European cooperation and coordination of monitoring & control actions needed: EC to support exchange of contacts and data in a timely manner via a user-friendly platform



A man with a beard, wearing a striped shirt and blue shorts, is smiling while riding a large water buffalo. The buffalo is standing in a dry, grassy field with some trees in the background. The sky is a warm, orange-brown color.

Thank you for your attention!

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