

Welcome to Rock-Lovers Paradise When Biodiversity invites itself into the quarries



The unsuspected biodiversity of our quarries in comic form

September 2018

Abstract

When we imagine a quarry, we see sand, rock, dust, trucks, etc. Our imagination does not spontaneously populate the place with wild animals. However, if we take the time to observe, quarries abound with micro-habitats, those small isolated environments where life has settled. In order to introduce these “little worlds” to schoolchildren and the general public, and to make operators aware of the hidden wealth of their quarries, CEN Aquitaine has proposed creating a comic strip for all audiences. This comic, entitled “Welcome to the Rock-Lovers Paradise, when biodiversity invites itself into the quarries”, presents us with the arrival of sand martins (*Riparia riparia*) at a quarry. Other species cross their path: the European pond turtle (*Emys orbicularis*), dragonflies, amphibians etc. These will have to cohabit with the operators. All these species are present at the Aressy quarry, operated by GSM Heidelberg, which this comic is inspired by. The main topics for hosting these species are also discussed in the comic strip.

1. Profile of the participant

▪ Contestant name:	Virginie Leenknecht
▪ Contestant occupation:	Project Leader in wetlands
▪ University / Organisation	CEN Aquitaine
▪ Number of people in your team:	2

2. Project overview

Title:	The unsuspected biodiversity of our quarries in comic form: “Welcome to Rock-Lovers Paradise, When Biodiversity invites itself into the quarries”
Contest: (Research/Community)	“Societal initiatives” theme
Quarry name:	Aressy

Introduction:

The Conservatory of Natural Areas of Aquitaine [Conservatoire d'espaces naturels d'Aquitaine] (CEN Aquitaine) is a nonprofit organisation according to the law of 1901, approved for the protection of nature. Its missions are the management of natural areas, knowledge of the environment, awareness-raising and promotion.

In 2004, the CEN Aquitaine created its SAGNE [Service d'aide à la gestion des zones humides] (Wetland management support service) network which in 2008 became the Wetlands Technical Assistance Cell of the Pyrénées-Atlantiques [Cellule d'Assistance Technique Zones Humides des Pyrénées-Atlantiques] (CATZH64). This service provides wetland owners and managers with advice and technical support for the preservation of these areas.

It is for the purpose of obtaining advice on the management of a body of water and a wet afforestation on the Aressy site that the company GSM, producer of aggregates (sands and gravels), now GSM Heidelberg, requested the CATZH64 in 2012 and signed a membership agreement for this network in 2013. Since this signature, an inventory of the species present on the site has been carried out (fauna and flora) and the natural habitats have been mapped. Concerning the preservation actions, these have mainly focused upon the European pond turtle; improvement of the environment to encourage its presence.

After five years of partnership and after joining the group Heidelberg Cement, GSM encouraged CEN Aquitaine to participate in the Quarry Life Award by making its Aressy site available. With the recent creation of an illustrator position at CEN Aquitaine, the theme quickly imposed itself: to create a Comic Strip.

Method

Like any project, a comic strip is assembled in several stages:

1. Identify the message to be conveyed, the goal of the comic strip and the target audience

A first meeting between the two employees of CEN Aquitaine in charge of this project and the land/environment manager of GSM was able to define:

- The message: discovering the biodiversity of quarries and showing that it is possible to reconcile biodiversity and exploitation.
- The goal: raising awareness.
- The target audience: this is multiple because this comic strip will be able to address a young public as well as the quarry employees.

2. Build the scenario

The scenario originates from a group reflection. It has mobilised four people from CEN Aquitaine: two people from communication and two project leaders.

The important thing for this scenario was to find an original angle from which to address the subjects and issues of biodiversity within a quarry.

In this scenario it was necessary to imagine characters (first role and supporting roles based on real creatures), a story with a plot, a twist that is the most original and unexpected possible to make it attractive to read but also that takes into account the reality of the facts.

3. Realisation of a storyboard

The storyboard is a preparatory sketch for putting the ideas on paper for an outline of the depiction. It then serves as a guide for the illustrator. The creation of this document required two days of work for:

- making preparatory sketches on the sand martins who are the main characters of the comic strip, sketching several postures of the bird (from photos), and looking for a caricature angle for the different creatures/characters represented
- making pencil sketches of the different scripted strips and situation analysis of the story
- writing dialogues (finding a tone, an angle and a style of writing that is simple, fluid, rather funny and hard-hitting)

With this preliminary work, the illustrator concluded that six boards would be needed to unfold the story, as well as a cover page and an end page.

4. Design: from the drawing boards to the colouring

The number of days planned on this project did not allow for several board tests. The pencil drawings and inking of the six boards in A4 format, and the cover and end pages, were therefore made directly onto the final boards. This artistic “one-shot” required 2.5 days of work.

The A4 boards were then digitised in high definition (1,200 dpi) and the image was processed (white treatment and micro corrections of drawings) for half a day.

Finally, four days were needed for the digital colouring of the boards, performed with the help of an image processing software (Photoshop).

5. Layout of the comic strip

For this step, which lasted a day and a half, the incorporation of the boards was done in a layout software (InDesign) for inserting and placing the speech balloons. The first and last pages were incorporated as well as the end text.

6. Finalisation

The comic strip was read by several employees of the CEN as well as by the land/environment manager of GSM, in order to make the last corrections of the text (the drawing could not be retouched).

7. On-line launch

The websites on which the comic strip will be available are:

- www.cen-aquitaine.org
- www.catzh64.cen-aquitaine.org
- www.gsm-granulats.fr

Discussion

The project has evolved throughout its development. Originally, seven days were budgeted for three drawing boards and a cover page. For writing a coherent text with a plot and a twist, it finally took more than ten days to create the comic strip, with six boards as well as a cover page and an end page. However, this number of days did not allow the reworking of certain boards, where typos slipped in, such as the presence of truck-mixers instead of truck-loaders.

In September, we hoped to present the comic strip to schools in the municipality of Aressy to analyse the impact on the young audience and its understanding. Professors were really interested but the period was not suitable because of the back to school. Just two young kids read the comic and found it fun and with nice draws.

Regarding to the GSM employees, the opinions of are split:

- bad sides : some found that the employees of quarries are poorly represented and that they are like ignorant. Their commitment and interest for the biodiversity is not highlighted. Some colors seem to be stressful.
- good sides: the games words are good, the comic strip is a good way to learn things on species, it's funny and draws are nice.

This comic strip must be seen like self-mockery because unfortunately, most people are seeing the operators of quarries like the sand martins are seeing them in the comic strip.

This comic strip was made to be a communication support for GSM and CEN Aquitaine. By the way of humour and self-mockery, we can touch a lot of people. Thanks to the funny faces of the species and the nice colors (in most part of the comic), people will finish the comic with a smile and a good thought about the operators of quarries. If it's not the case, we are here to explain. We hope that this comic will open some minds and news dialogues. And we hope too, that the quarries which have these kind of species and don't know what to do, will learn of this comic.

If a series of comic strips is created on the topic of quarries, we will make allowance for all the opinions. If GSM thinks that some dialogues reflect badly on their commitment, they can be changed (as far as possible: the dialogue have to go in the frame).

Conclusion

The employees of CEN Aquitaine took pleasure in creating this comic strip. It is only the beginning of what we hope will be a long series. The topics are plenty (invasive species, rehabilitation...). CEN Aquitaine hopes that Heidelberg and its subsidiaries will be satisfied with this work and wish to continue the adventure on other themes in comic strips.

<p>Project focus:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Beyond quarry borders <input checked="" type="checkbox"/> Biodiversity management <input type="checkbox"/> Cooperation programmes <input checked="" type="checkbox"/> Connecting with local communities <input checked="" type="checkbox"/> Education and Raising awareness <input type="checkbox"/> Invasive species <input type="checkbox"/> Landscape management <input type="checkbox"/> Pollination <input type="checkbox"/> Rehabilitation & habitat research <input type="checkbox"/> Scientific research <input type="checkbox"/> Soil management <input type="checkbox"/> Species research <input type="checkbox"/> Student class project <input checked="" type="checkbox"/> Urban ecology <input type="checkbox"/> Water management <p>Flora:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Trees & shrubs <input type="checkbox"/> Ferns <input type="checkbox"/> Flowering plants <input type="checkbox"/> Fungi <input type="checkbox"/> Mosses and liverworts <p>Fauna:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Amphibians <input checked="" type="checkbox"/> Birds <input checked="" type="checkbox"/> Insects <input type="checkbox"/> Fish <input type="checkbox"/> Mammals <input checked="" type="checkbox"/> Reptiles <input type="checkbox"/> Other invertebrates <input type="checkbox"/> Other insects <input type="checkbox"/> Other species 	<p>Habitat:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Artificial / cultivated land <input type="checkbox"/> Cave <input type="checkbox"/> Coastal <input type="checkbox"/> Grassland <input type="checkbox"/> Human settlement <input checked="" type="checkbox"/> Open areas of rocky grounds <input type="checkbox"/> Recreational areas <input checked="" type="checkbox"/> Sandy and rocky habitat <input type="checkbox"/> Screes <input type="checkbox"/> Shrub & groves <input type="checkbox"/> Soil <input type="checkbox"/> Wander biotopes <input type="checkbox"/> Water bodies (flowing, standing) <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Woodland <p>Stakeholders:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Authorities <input checked="" type="checkbox"/> Local community <input type="checkbox"/> NGOs <input checked="" type="checkbox"/> Schools <input type="checkbox"/> Universities
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BIENVENUE CHEZ LES KIFF-CAILLOUX

Quand la biodiversité s'invite dans
les carrières



Conservatoire
d'espaces naturels
Aquitaine
Nouvelle-Aquitaine

EN FIN D'HIVER, AU FIN FOND DE L'AFRIQUE TROPICALE, UN PETIT GROUPE D'HIRONDELLES S'APPÊTE À REJOINDRE L'EUROPE POUR LA BELLE SAISON....

1

2

AHHH te revoilà Gwanelie !
On t'attendait ! T'as trouvé un bon plan pour les vacances ?

3

Ouais, une super promo !
Je vais vous montrer ça...

4

Mouais... ! Encore un des tes plans bizarres plutôt non ?

5

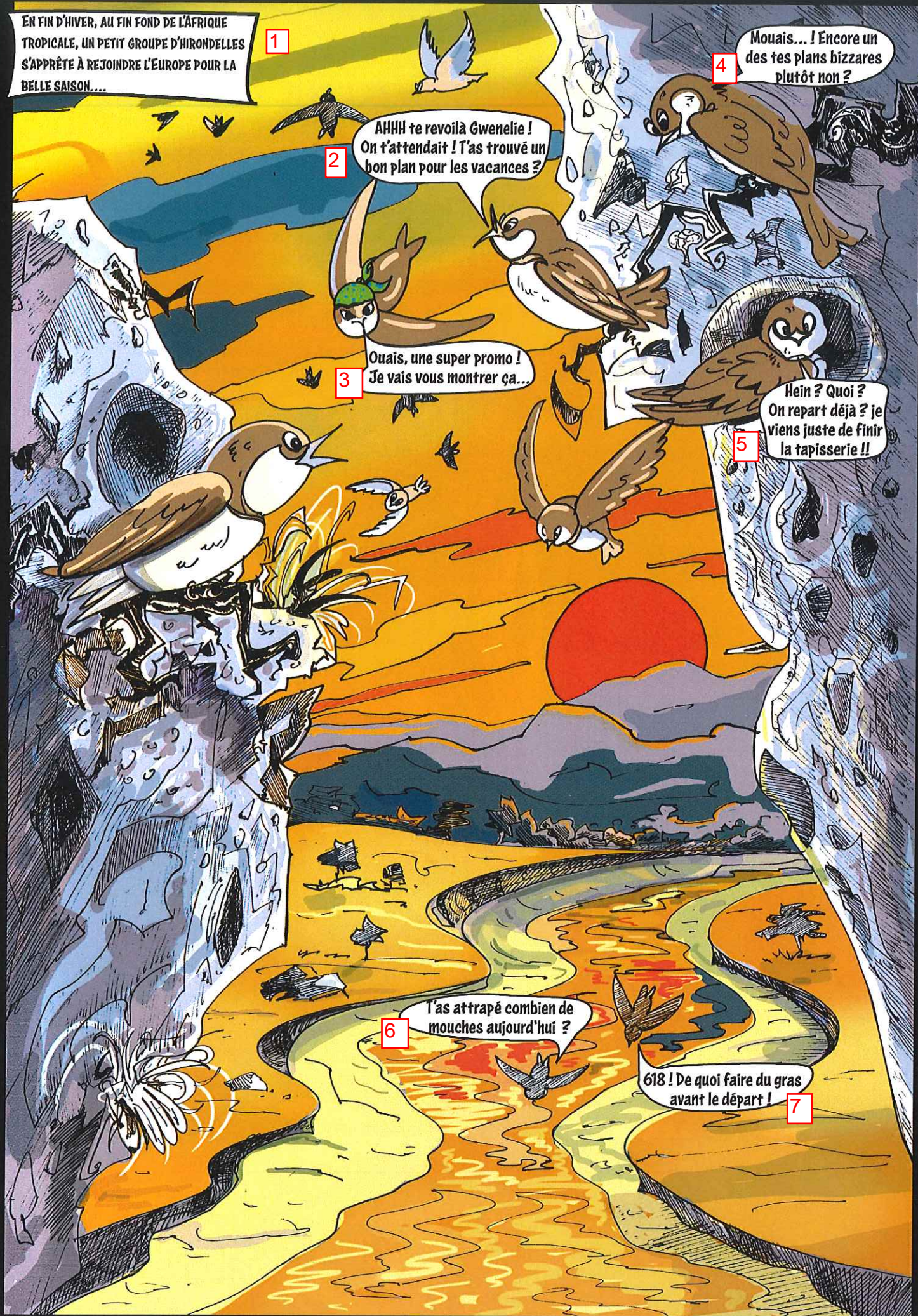
Hein ? Quoi ?
On repart déjà ? je viens juste de finir la tapisserie !!

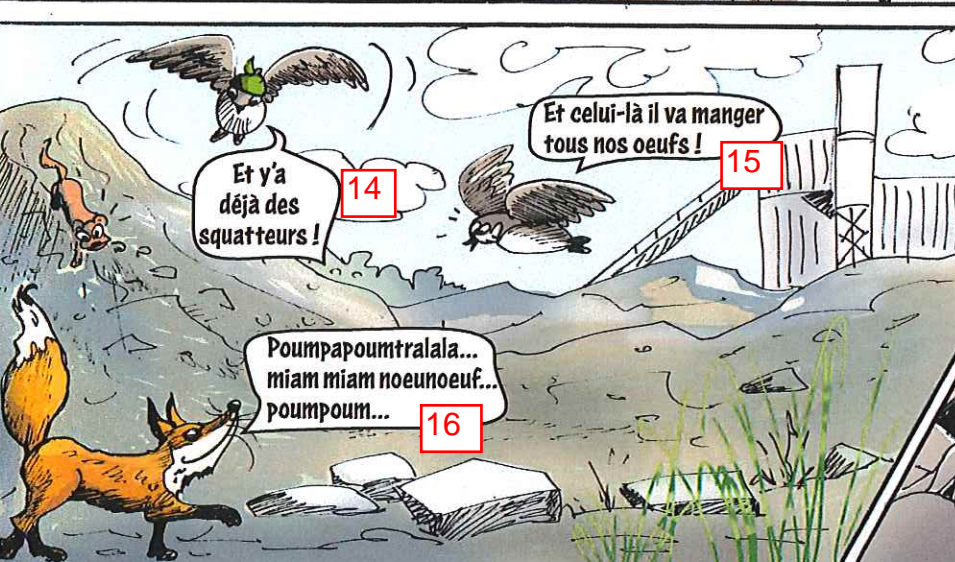
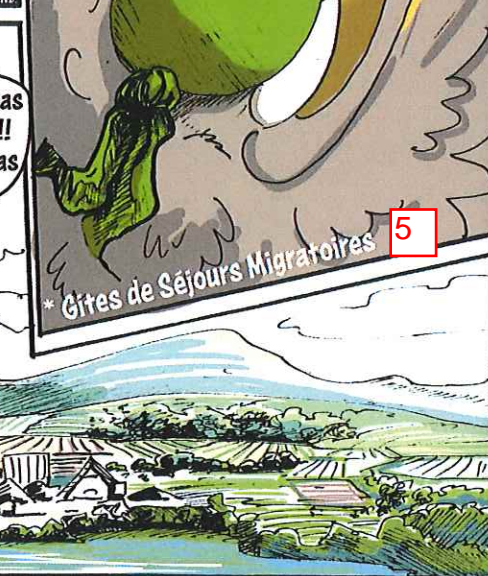
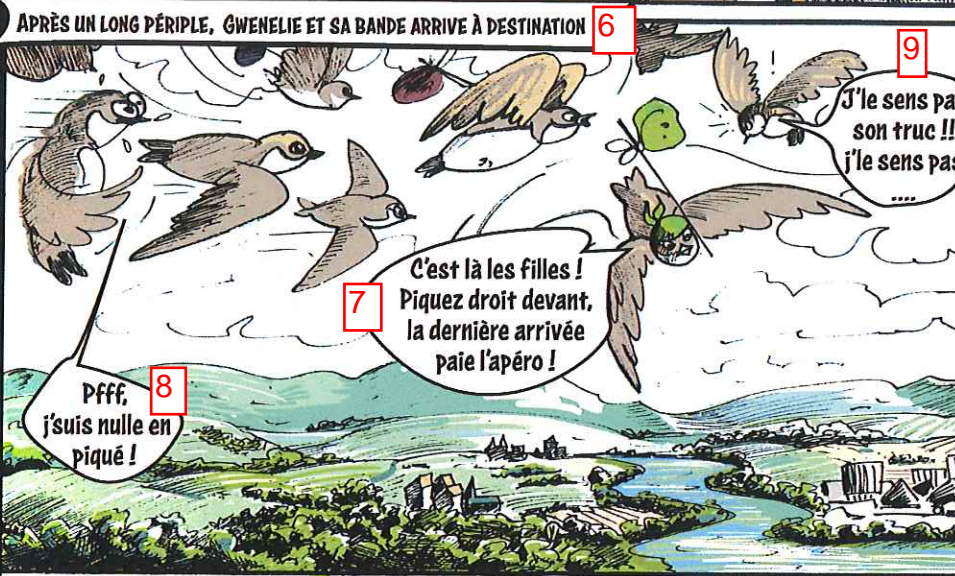
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T'as attrapé combien de mouches aujourd'hui ?

7

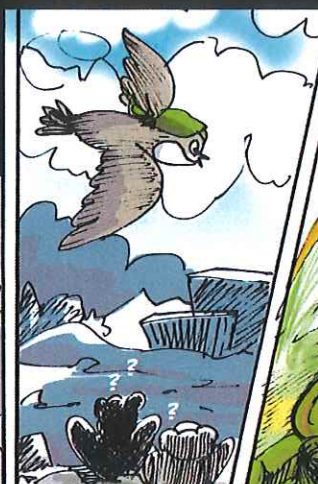
618 ! De quoi faire du gras avant le départ !





Je vais m'expliquer avec le gérant du Club Vacances, bougez pas !

1



Salut les amoureux ! Je cherche le gérant.

2

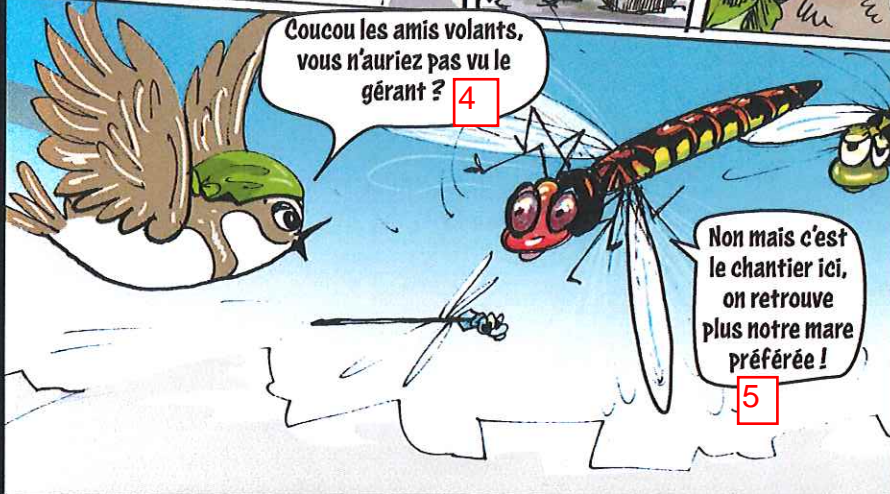
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Pareil ! On est arrivés hier soir, ma femme va accoucher et pas une mare paisible à l'horizon !



Coucou les amis volants, vous n'auriez pas vu le gérant ?

4



Non mais c'est le chantier ici, on retrouve plus notre mare préférée !

5

Voyons voir de ce côté si je trouve quelqu'un.

6



7

Hello Mme Cistude, Vous habitez ici ?

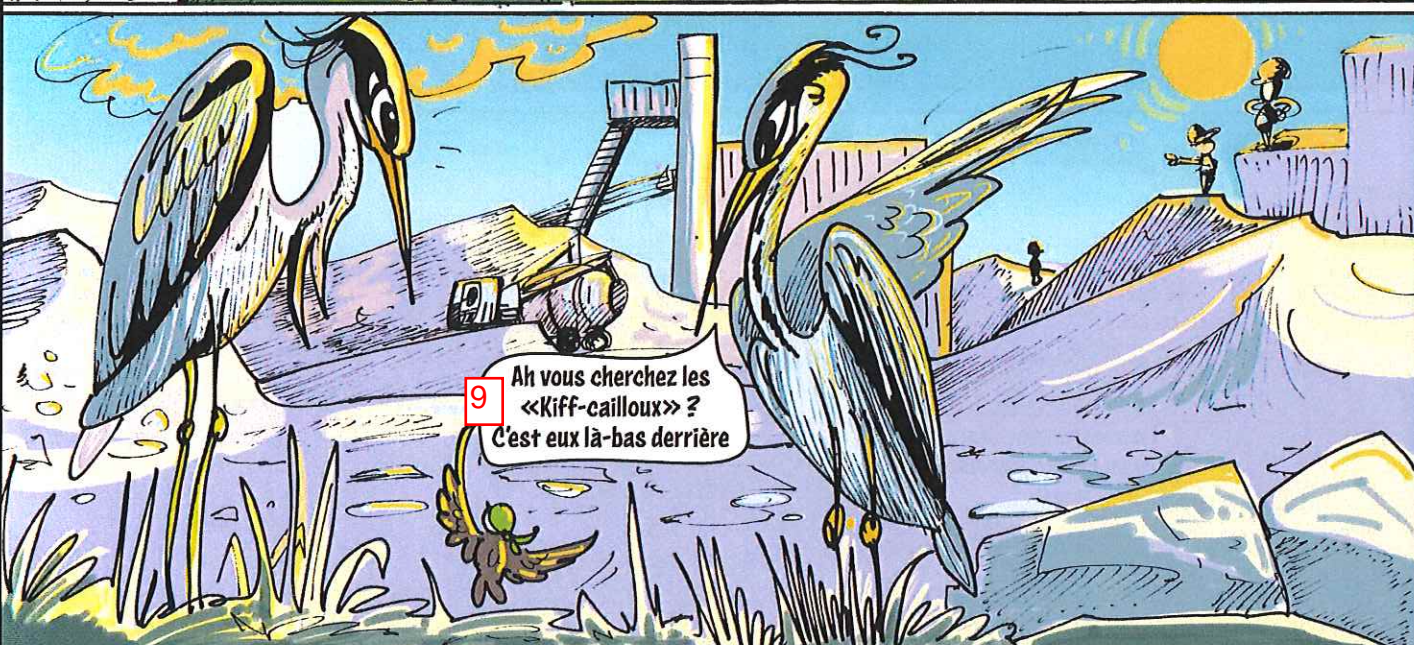
Oui mais j'suis dégoûtée, mon solarium est parti avec la dernière crue !

8

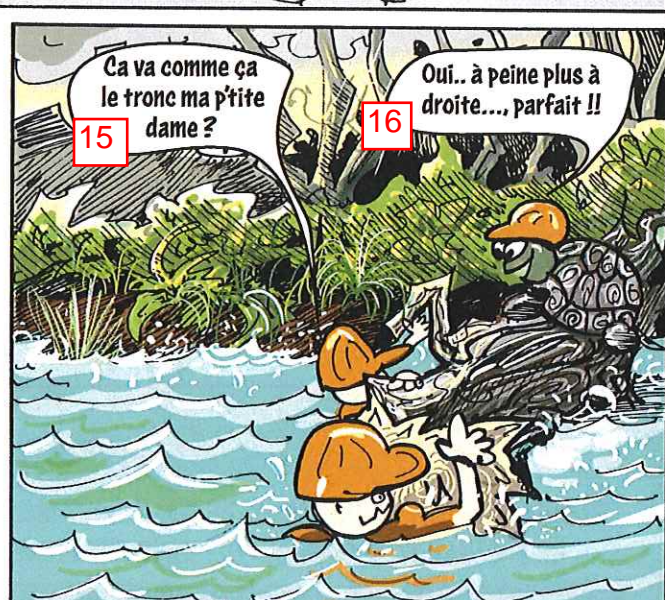
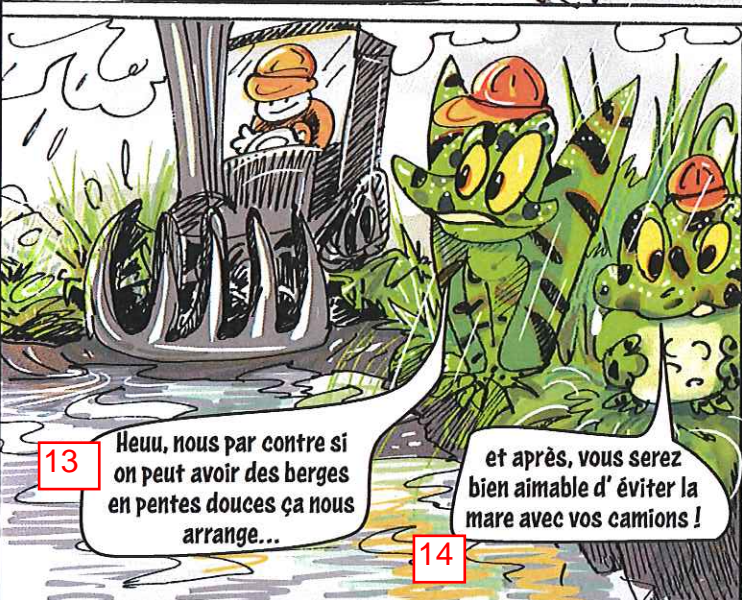
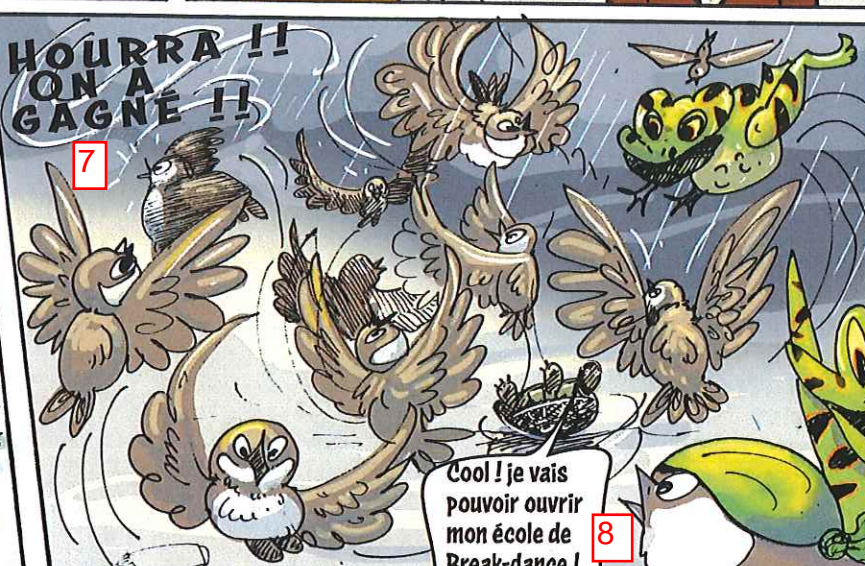


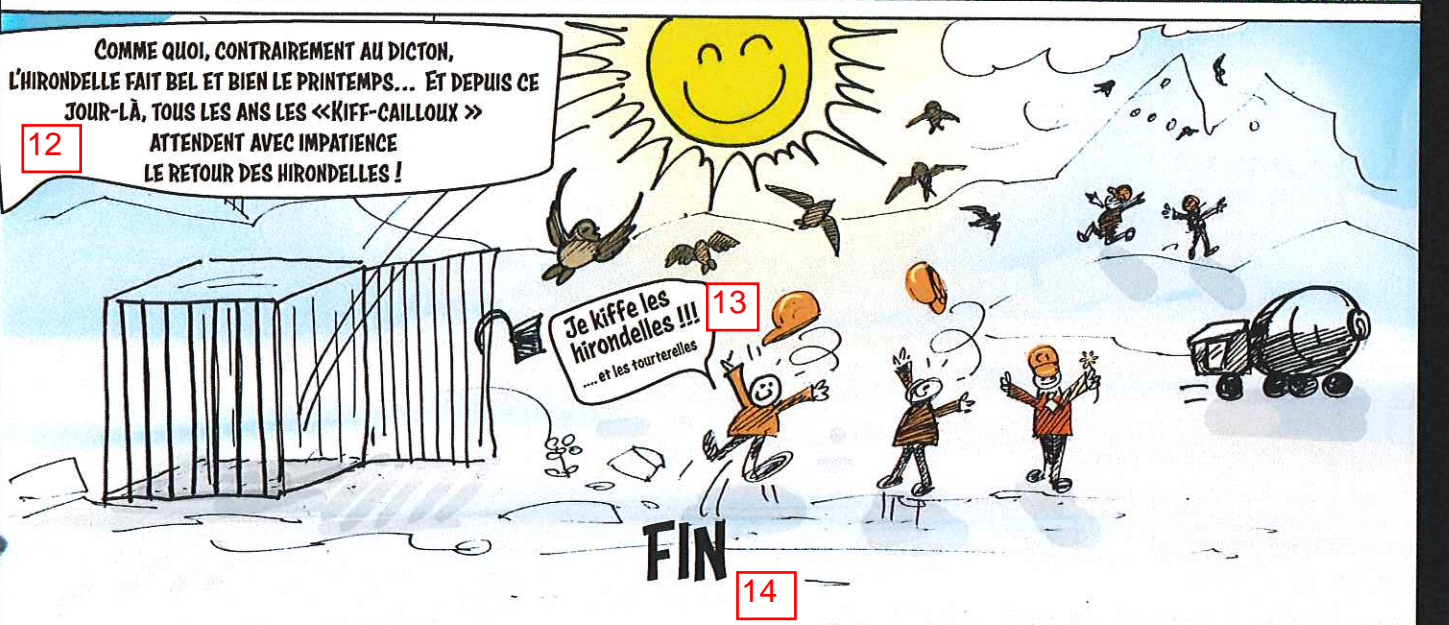
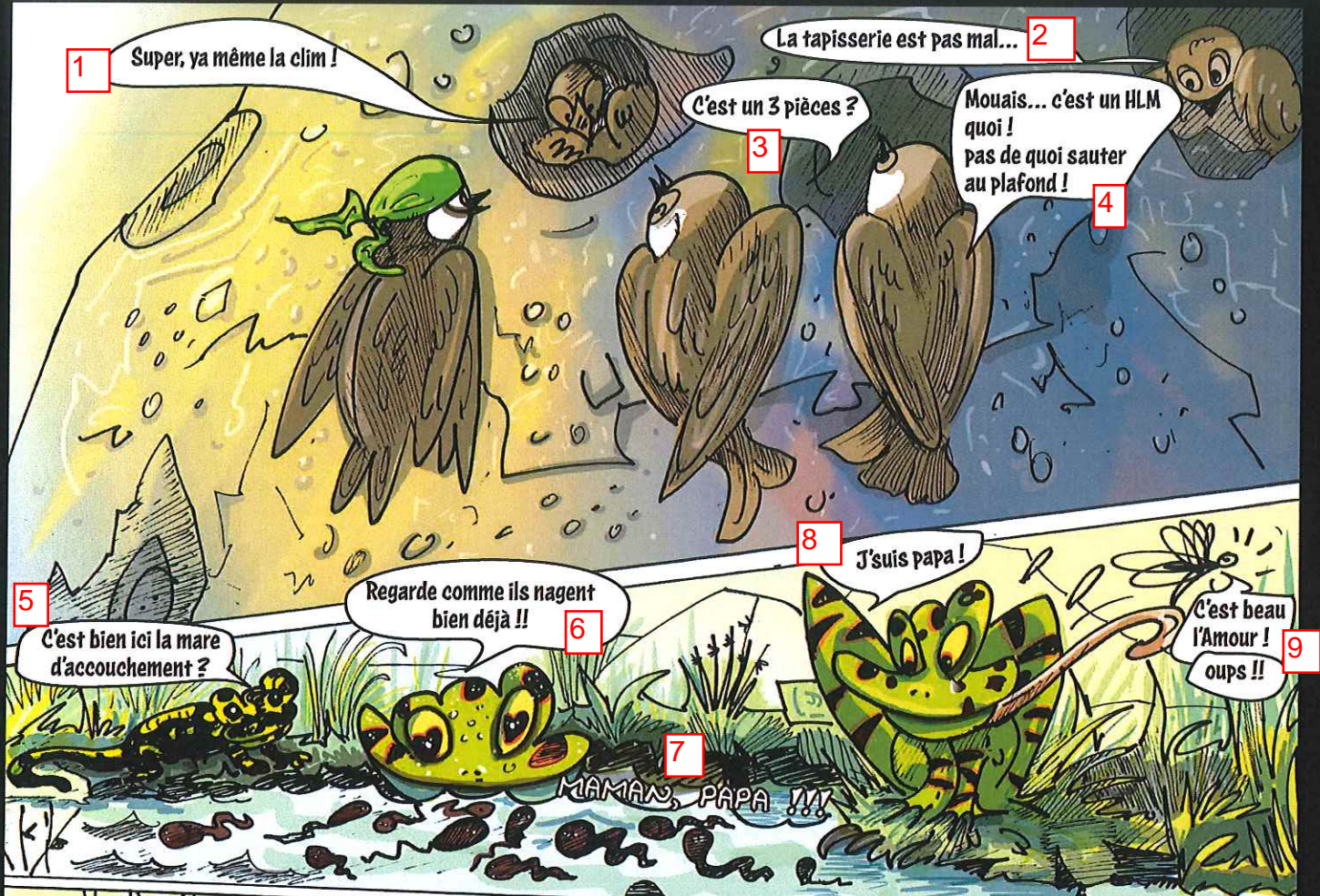
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Ah vous cherchez les « Kiff-cailloux » ? C'est eux là-bas derrière









Casting BD

par ordre d'apparition :



1

GWENELIE (ET SA BANDE) :
HIRONDELLE DE RIVAGE

Insectivore, elle aime les zones humides naturelles et artificielles. Elle passe l'hiver en Afrique (sud du Sahel).
Signe particulier : déteste qu'on la traite de tourterelle.



2

M. ET MME ANOURE (AMPHIBIENS
SANS QUEUE) : GRENOUILLES

Ils vivent dans les eaux calmes et s'enterrent durant l'hiver. Ils sont essentiellement insectivores.

Signe particulier : ont inspiré la célèbre chanson de Jacques Brel « Quand on a que l'Anoure ».



GUDULE ET GISÈLE : LIBELLULES

Gudule est une libellule vraie (anisoptère) et Gisèle une demoiselle (zygoptère). Elles fréquentent les zones humides. Leurs larves vivent dans l'eau, se nourrissant d'invertébrés aquatiques, de têtards, d'alevins... puis entament leur vie aérienne d'adultes volants, chassant des insectes.

3



4

MME GERTRUDE : CISTUDE D'EUROPE

On peut la voir dans les étangs et les marais prenant de longs bains de soleil sur des rochers ou des troncs émergés. Elle passe l'hiver enfouie dans la vase. Elle se nourrit d'insectes aquatiques, vers, mollusques, têtards, crustacés...

Signe particulier : experte en break-dance



M. ET MME PETIT-PATAPON :
HÉRONS CENDRÉS

5

Plutôt sédentaires dans nos régions, ils aiment les milieux humides aux eaux peu profondes. Ils mangent principalement du poisson mais aussi des amphibiens, reptiles, crustacés, petits rongeurs...



6

LES KIFF-CAILLOUX : HOMO-SAPIENS

Les Homo-sapiens s'adaptent à tous les types de milieux. Les zones où les populations sont très denses sont appelées « villes » (ou « centres commerciaux » le samedi).

Ce sont de super prédateurs omnivores (bien que les jeunes soient plutôt burgerfrittivores).

En Europe, on observe de gros flux migratoires vers les plages en juillet-août.



M. CAGOUILLE :
ESCARGOT PETIT-GRIS

Sourd et quasiment aveugle, il possède 2 « nez » très puissants à l'extrémité de ses « cornes ». Il adore les feuilles d'ortie... et la pluie !

7



8

MADAME URODÈLE (AMPHIBIEN
AVEC QUEUE) : SALAMANDRE

C'est la cousine de M. et Mme Anoure (du côté de son père). Elle aime les bois humides. Elle ne rejoint l'eau que pour y déposer ses larves. Elle mange à la même table que ses cousins.



FIGURANTS ANONYMES

9

ET POUR LE RESTE :

10

- Celle qui a scénarisé et dessiné : Maud BRIAND
- Celles qui ont écrit et cogité les textes : Laure BERGER SABBATEL et Maud BRIAND
- Ceux qui ont participé à éclairer l'histoire : Virginie LEENKNEGT, Simon CAUBET

Title: Welcome to Rock Lovers Paradise!

Subtitle: when biodiversity invites itself into the quarries

Page 1:

[1] *At the end of winter, in the darkest depths of tropical Africa, a small group of swallows prepare to join the rest of Europe for the summer....*

[2] "Ahh, there you are Gwenelie! We were waiting for you! Have you thought of any plans to spend the holidays?"

[3] "Yes, I found an amazing offer! I am going to show it to you guys..."

[4] "Oh boy... You don't mean another one of your crazy ideas, do you?"

[5] "Wait, what? We're already leaving? I've only just finished doing the wallpaper in here!"

[6] "How many flies did you catch today?"

[7] "618! Nothing wrong with gaining a little weight before leaving!"

Page 2:

[1] "Look at that! We will be treated like royalty at the GSM holiday cottages!"

[2] "Yeah it looks amazing!"

[3] "It even has an all-you-can-eat buffet!"

[4] GSM* Promotion

€1 all-you-can-eat flies

[5] *Migratory stay holiday cottages

[6] *After a long journey, Gwenelie and her friends arrive at their destination*

[7] "It's there, guys! Swoop right ahead, the last one there has to buy everyone a drink!"

[8] "Pfff, I'm terrible at nosediving!"

[9] "This isn't in my comfort zone at all! "

[10] "Woah! It doesn't really look like the picture in the brochure, does it?"

[11] "There! Who was right in the end?"

[12] "Is it the set for a science fiction film?"

[13] NO ENTRY

[14] "And there are already squatters here!"

[15] "And that one over there is going to eat all of our eggs!"

[16] "Hmhmhmhmhm an egg mmmmm"

[17] "This isn't going to do it, we need to do something!"

[18] "YES!!! "

[19] Crisis management team

Page 3:

[1] "I'm going to have a chat with the Vacation Club manage. Don't move!"

[2] "Hello lovebirds! I am looking for the manager."

[3] "Us too! We arrived last night, my wife is about to give birth and there isn't a peaceful pond in sight!"

[4] "Hey there, my flying comrades! You wouldn't have seen the manager, by any chance?"

[5] "No, but it's a mess here! We can no longer find our favourite pond!"

[6] "I'll just look over here and see if I find someone."

[7] "Hello, Mrs Turtle! Do you live here?"

[8] "Yes, but I'm disgusted! I lost my solarium after the last flood."

[9] "Ah, you're looking for the "Rock lovers"? There down that way"

Page 4:

[1] "Hello! We have just arrived and the state of the place leaves much to be desired! Who is responsible here?"

[2] "What's that turtle dove trying to say to us?"

[3] "It's very nice here! See, you've got a great pile of rocks, the sun. "

[4] "Have you thought about names yet, darling?"

[5] "Honestly! Do I look like a turtle dove?"

[6] « Theodore, Rose, Josephine, Emile, Marie, Colette, Yvonne... »

[7] « Well, it's not over yet! We are going to have to bring out the heavy guns... I think I have an idea!"

[8] "We are going to kidnap spring!! Hahahahaha"

[9] ("Yes", "great idea", "brilliant", "let's go!")

[10] "This is actually warming me up to their cause!"

[11] No construction, no spring!

[12] We've had enough, we want ponds!

[13] Biodiversity for everybody!

[14] Damn it!

[15] No rockface, no peace!

[16] We want heaps of slopes!

[17] *Following a disastrous period of uncontrollable climate change, the "rock lovers" fall into a deep depression...*

Page 5:

[1] "Boss, it's raining even harder! Do something, the trucks are under water, the guys are at the end of their rope!"

[2] "Oh, all right. Do what they ask!"

[3] "Well what's the problem? The weather is beautiful!"

[4] "So, have you made up your mind?"

[5] "It's OK, we will arrange for everything you wanted!"

[6] "We said a pond, not a lake!"

[7] "Hurray, we won!!"

[8] "Cool, I'll finally be able to open my break dancing school!"

[9] *And so the work began...*

[10] "There you go, now that's a steep slope! Which goes to show it wasn't that complicated!"

[11] "You can use it again when we leave, you will only have to rebuild it again next spring."

[12] "Phew!"

[13] "Well as for us, if we could have gentle slopes that would suit us..."

[14] "And after that, it would be very considerate of you to get your trucks out of the pond!"

[15] "Is the trunk okay like that, young lady?"

[16] "Yes, just a tiny bit more to the right... perfect!"

Page 6:

[1] "Super, there's even air conditioning!"

[2] "The wallpaper isn't too bad..."

[3] "It has three rooms?"

[4] "Well, it's really a council estate, no need to hit the roof!"

[5] "Is this the maternity pond?"

[6] "Look how they already swim so well!"

[7] "Mama, papa!"

[8] "I'm a dad!"

[9] "Love is beautiful... oops!"

[10] "Aren't we all well here, my darlings? Ready to tan your shells?"

[11] "Be careful of the sunshine at first kids..."

[12] *It just goes to show, unlike the popular saying, it does take one swallow to make a summer, and ever since that day, every year the "rock lovers" wait impatiently for the swallows to return!*

[13] "I love the swallows! ... and the turtle doves!"

[14] -The End-

Page 7:

The cast of the comic

In order of appearance:

[1] Gwenelie (and her team) : Bank swallow

An insectivore, she loves natural and artificial wetlands. She spends winter in Africa (south of the Sahel).

Distinguishing feature: She hates being mistaken for a turtle dove

[2] Mr and Mrs Anura (amphibians with no tail): Frogs

They live in still water and bury themselves during winter. They are mainly insectivores.

Distinguishing feature: They are inspired by the famous song of Jacques Brel: "When one has only love"

[3] Gudule and Gisele: Dragonflies

Gudule is a dragonfly (Anisoptera) and Gisele is a damselfly (Zygoptera)

They often travel to wetlands. Their larvae live in the water, feed on aquatic invertebrates, tadpoles, fry... then begin their life in the air as adults who fly and chase insects.

[4] Mrs. Gertrude: European pond turtle

You can see her in ponds and swamps taking long baths in the sun under rocks or emerging tree trunks. She spends winter buried in the mud. She eats aquatic insects, worms, molluscs, tadpoles and crustaceans.

Distinguishing feature: Expert in break dancing

[5] Mr and Mrs Petit Patapon: Common herons

More settled in our areas, they like wetlands near deeper water. They mostly eat fish, but they also eat amphibians, reptiles, crustaceans, small rodents...

[6] The Rock Lovers: Homo sapiens

Homo sapiens adapt to every type of environment. Areas where their population is quite dense are called “cities” (or even “commercial centres” on Saturdays.)

They are super omnivorous predators (despite their young being more “Burger- chips-ivores”).

In Europe, we have seen a huge wave of migration towards beaches in July and August.

[7] Mr Cagouille: Brown garden snail

Deaf and practically blind, he has two very powerful “noses” at the top of his “horns”. He loves nettle leaves and rain!

[8] Mrs. Urodela: (amphibian with tail): Salamander

She is the cousin of Mr and Mrs Anura (on her father’s side). She loves damp wood. She doesn’t go into water except when dispersing her larvae. She eats the same food as her cousins.

[9] Anonymous characters

[10] And for the rest:

- Screenwriter and illustrator: Maud Briand
- Writers and mulled over the scripts: Laure Berger Sabbatel and Maud Briand
- Participants who brought the story to life: Virginie Leenknecht and Simon Caubet