

“Salmon on the Rough Edge of Canada and Beyond”

Salmon
People



This series of 10-short stories has been written to honour the salmon, the beautiful rivers that they exist in and some of these memorable people who have worked tirelessly over the past decades on the task of conserving and restoring these iconic species.



The author, Matt Foy, as a biologist with the Fisheries and Oceans Canada (DFO), Salmonid Enhancement Program(SEP) for 35 years (now retired), has tried to capture small glimpses into their world and the world of salmon.

Restoration of Chum Salmon in China

恢复中国大马哈鱼



The restoration of chum salmon in China is being led by a Chinese NGO, Salmon Ecological Environment Protection Association (SEEPA) of Fuyuan County, Heilongjiang Province. SEEPA was founded in 2015 and has been financially supported by the “Forever Nature Capital Foundation” (FNCN), formed in 2016, under the sponsorship of a group of China entrepreneurs.
(<http://www.dmhrun.com>)

该项目是由中国企业家们发起，2015年成立抚远大马哈鱼生态环境保护协会 SEEPA、黑龙江省环境保护教育学会（Environmental Education Society of Heilongjiang Province）做为项目的执行机构，2016年成立永续自然保护公益基金会（The Forever Nature Capital Foundation）做为项目的统筹机构。

Chum salmon were an historically abundant species in Northeast China and important as a local food source during winter time for both people and wildlife for millennia. Unfortunately, this species is close to being extirpated from China streams within the Heilongjiang and other China watersheds.

历史上中国东北地区大马哈鱼资源曾经非常丰富，做为当地人和野生动物的重要越冬食物来源已久。不幸的是，在中国黑龙江和其他流域中，该物种已经接近灭绝了。

This great watershed is shared between three countries, China, Russia and Mongolia and was once the greatest chum salmon producing river in the world. Early estimates place chum salmon returns to this watershed in excess of 30 million per year.

这片重要的流域由中国，俄罗斯和蒙古共同享用，曾经是世界上最大的大马哈鱼产出河流。对该流域早期的估计每年超过三千万条。

Today these chum salmon returns have declined to less than a third of those levels that existed before the arrival of extensive commercial fisheries beginning in the early twentieth century.

今天这个数量已经锐减到该水平的三分之一，而这一切都源于二十世纪兴起的大规模商业捕捞。

Chum salmon migrated farther upstream in the Heilongjiang/Amur River than in any other river in the world, with reports of chum salmon spawning in streams 3000 kilometers from the ocean.

大马哈鱼在黑龙江中洄游的距离长于世界上任何其他河流，报告指出它们在距离海洋 3000 米远处产卵。

One of SEEPA projects will focus on the education of children to better understand the needs of the chum salmon and how healthy rivers are important to both salmon and people.

SEEPA 的其中一个项目是关注孩子的教育，让他们理解大马哈鱼的需要，以及健康的河流对人和大马哈鱼的重要性。

Black Dragon Salmon is a light -hearted story, written for primary school students, about one such chum salmon who comes from the Huma River, a tributary of the Heilongjiang River, almost 2000 kilometers upstream from the Pacific Ocean.

This story is dedicated to all those, that work to protect the future of salmon In China.

黑龙江大马哈鱼是一个轻松的故事，为小学生所写的有关一条来自黑龙江支流呼玛河的大马哈鱼，这条河流距离太平洋接近 2000 公里。

把这个故事献给所有工作在保护未来的中国三文鱼的人们。

Black Dragon Salmon

黑龙马哈鱼

By Matt Foy

One winter, not too long ago, when the Heilongjiang Province in northern China, was very cold and snow covered the ground and the rivers were frozen as hard as steel, a little fish would be born that would become very famous.

在一个冬季，并不是很久之前，当黑龙江省满地覆盖满冰雪，天地肃杀，河流冰结如铁，一条新生的小鱼殊不知自己将会变得家喻户晓。

Each fall a special fish, called the chum salmon, would swim up the Heilongjiang River from the ocean and then swim into the rivers that come out of the hills and mountains. These special fish are looking for certain rivers where the bottom of the river was covered with stones. Each chum salmon would return to the little river that they had been born in four years before.

每个秋季，一种特殊的叫做大马哈鱼的鱼，会从海洋里向黑龙江上游游去，最后到达隐秘的山峦之间的溪流中。这些鱼寻觅着一些河床密布石头的特殊河流。

The mother salmon using her tail would dig a shallow nest in the stones. The father salmon would keep watch for any danger and protect the mother while she does this hard work.

三文鱼母亲用自己的尾巴挖出一个浅坑作为自己的巢穴。三文鱼父亲则负责坚守巢穴避免敌害，而母亲则继续自己的艰难工作。

Once the nest was just the right size she would lay her eggs down at the bottom of the nest and the father salmon would help her and then she would quickly cover them up with small stones so no other fish, or bird or animal could eat the little eggs.

当母亲对巢穴的尺寸感到恰如其分，她会将自己的卵产在巢穴底部，而父亲则帮助完成这一任务，接下来，母亲会迅速的用小卵石盖住自己的巢穴，所以没有其他的鱼，鸟类，或者动物会捕食掉它们珍贵的卵。

The eggs were protected in this nest at the bottom of the river all through the long winter. The rivers were very cold in the winter and the little eggs must be protected from



the hard ice that could hurt them. The mother chum salmon were very smart and careful to dig their nests in only very special places in the stones. They chose places were there where the water was a little bit warmer and would not freeze during the long cold winter months.

在这漫长的冬季，鱼卵静静地躺在河流底部的三文鱼巢穴中。河流在冬季冰冷万分，而这些卵受到保护，从而免受坚冰的侵害。聪明且机灵的三文鱼母亲仅仅在非常特殊的卵石区域中挖掘自己的巢穴。它们选择的这些地方比河流中的其他地方稍显温暖，而且在漫长严寒的冬季中也不会结冰。

When spring comes the little eggs hatch and turn into little fish called “fry”. These little fry wiggle and squirm their way up through the stones moving toward the light coming from the sky up above.

当春季到来，珍贵的鱼卵孵化成了小鱼，它们被叫作“封口苗”。这些小鱼苗不安地扭动自己的身体，从石头的缝隙中钻出来，寻找天空给予的光明。

Finally, after trying very hard they wiggle out of the stones and swim up into the river. Now they can swim around and around in the rivers and after eating a bug or two to fill their bellies, they turn their little silver noses down the river and swim a very long time all the way to the great Pacific Ocean.

终于，在不断地尝试下，它们蠕动着自己的身体，游到了河流中。现在它们可以在河流中游来游去，在食用过几只河里的小虫，幸福塞满肚中后，它们将自己银色的鼻子指向下游，并开始了一段漫长的旅程从而去往伟大的太平洋。

When they get to the Pacific Ocean they like to swim all around sometimes going very deep into the dark places or sometimes swimming up to the surface of the ocean. The chum salmon in the ocean grow big and fat in only a few years in the ocean.

当它们抵达太平洋之后，它们四处游曳，时而游向深邃的海洋深处，时而游向海洋表层。大马哈鱼在海洋中成长的十分迅速，仅仅数年后就变得又大又肥。

Maybe after three years, or maybe after four years, or maybe after five years, the chum salmon want to go back home to river they were born in, so they can find the stones at the bottom of their home rivers and lay their eggs, as their mother and father had done.

可能三年后，也可能是四年后，还可能是五年后，大马哈鱼会回到自己出生的家乡河流，并找到家乡河流的石头并产下卵，而这正式它们的父母曾经做过的。

This story is about one special chum salmon named Xin.

这个故事是有关一条特殊的大马哈鱼叫新。

Little Xin

Little Xin felt very warm and happy laying in his bed that morning. He could hear the other fish wiggling in their beds next door and the soft sound of the river flowing upstairs. He liked that sound, he had heard it all the long winter. But today there was a new sound...crack...crack...crack...crunch.

小新早上醒来，幸福的躺在暖意洋洋的床上。他能听到隔壁其他鱼在床上摇摆身体还有楼上河漏静静地流水声。他喜欢这个声音，整个冬季他都在享受这样的韵律。但是今天有一个新的声音……乒乒乓乓……吱呀……嘎吱。

He wondered what it was all about but could not see anything because it was very dark in his little room among the stones. Little Xin was safely tucked in his bed at the bottom of the big river, in the little the house of stones his mother had made for him last fall when she had laid her eggs.

他好奇这到底是怎么回事，他的房间里由于处在卵石之间显得很暗，他看不到任何东西。小新在广阔的河流中的底部，安全的住在自己石头做出的房间中，而这间房是它的母亲在上一个秋天产卵时做出来的。



What Little Xin was hearing was the ice on river above him starting to break up now that the air was warmer and spring had arrived.

小新听到的是在河流中的坚冰开始融化的声音，这预示着空气变得温暖，春天已经悄然到来。

It was late April on the river the people called the “Huma” and Little Xin was a chum salmon fry just about ready to wiggle out of his dark bed deep under the stones and swim up toward the bright sunshine of a perfect April morning. (1)

在四月末，人们叫做呼玛的河流中，小新作为一只大马哈鱼的封口苗已经准备好从自己昏暗的房间中蠕动着身体游出，游向四月第一个带有阳光的完美早晨。

Little Xin heard the other young fry all making new noises in their beds and they seemed very excited about something. He heard some of their voices moving away and up from his little room. They were leaving him and he wanted to go with them so he began to wiggle and wiggle and wiggle until he created so much wiggling that the roof of his room started to fall down. (2)

小新听到其他小鱼也在床上发出声响，而且似乎因为什么特别兴奋。他听到他们从狭窄的房间中离开游出的声音。鱼群要开始离开了，而他也想和大部队一起行动，所以他开始不停地蠕动着自己的身体，在不断地扭动下，他房间的天花板开始崩塌。

The small little pieces of sand above him started to fall down and he wiggled some more until began to see little pieces of light between the bigger stones above him. He did not know why but he felt he needed to swim up toward that light but he did and soon swam out of the stones into the fast water and bright light of the Huma River. This scared him at first so he immediately swam back down among the stones to find his safe dark place he was so used to and had kept him safe all winter.

在他头顶的沙子开始崩落，而他继续扭动直到大块卵石间开始有光线射入。他不知道为什么，但是他觉得自己需要游向阳光，而他确实这么做了，游到呼玛河的布满闪亮阳光的激流中。一开始这使他感到害怕，所以他迅速地回到了卵石中的那个使他在整个冬季感到昏暗而安全的房间里。

But the date was April 15 and it was time to get out of bed and see the big world so he swam up once again and started to move down the big river in the fast- flowing water.

(3)

但是时间已经来到4月15日，是时候离开自己的温床去见识宽广的世界了，所以他再一次游出并且开始在激流中向下游游去。

He saw a big fish coming toward him that seemed to want to talk to him and welcome him to the river. The big fish was opening its mouth to maybe say hello? Little Xin did not like the big teeth he saw in the big mouth coming toward him so he got scared and swam back down and hid in the stones at the bottom of the river once again.

他看到了一条巨大的鱼向他游来，好像是要打招呼并欢迎来到河流中。这条大鱼张开了大嘴可能是要说：你好？小新并不喜欢它的大嘴以及向他迎来的巨大牙齿，他再一次被吓到了，又回到了河床底部的石头中间。

After a little while of hiding in the stones he saw a big silvery school of chum salmon fry like himself swimming above him in the light, heading quickly down the Huma River.

Little Xin thought they looked friendly and did not have a big mouth with big teeth like the last fish he saw.

在躲藏了一会之后，他看到一大群银色的大马哈鱼封口苗，就像它长得一样，它们成群结队地游向阳光并向呼玛河下游游去

Very carefully he swam out of the stones and then swam up into the school of chum salmon fry. They wished him welcome which he understood very well because they were all speaking the Huma River dialect of the chum salmon talk which made him very happy.

他小心翼翼的从卵石堆中游出并加入到了大马哈鱼苗的鱼群中。他们给予了他欢迎的祝福，而且他非常理解这些小鱼的语言因为他们全都说着流利的呼玛大马哈鱼口音，这使他感到非常高兴。

Chum salmon hear with not just their ears but a special thing called a lateral line that runs down the side of their bodies. This made them very good listeners.

大马哈鱼不仅仅使用他们的耳朵去聆听，他们使用一种特别的的东西叫做侧线，这个器官在他们的身体两侧，而且使他们成为了非常成功的倾听者。

So along with his new friends he began his very, very long journey down the Huma River into the Heilongjiang (Black Dragon) River and then all the way to the great Pacific Ocean.

和他的新朋友们一道，开始了他漫长的向呼玛河下游的旅程，汇入黑龙江最后抵达伟大的太平洋。



The school of chum salmon fry had grown very much larger as other chum salmon fry from other salmon rivers had joined him as he moved down the mighty Heilongjiang River. Some of these chum salmon fry from China rivers spoke the Chinese chum talk but had funny accents because each rivers chum salmon talk was a little different. (4)

大马哈鱼封口苗的鱼群在向浩瀚的黑龙江游去的过程中逐渐变得越来越大，不断地有其他马哈鱼苗加入他们的群体。这些大马哈鱼封口苗来自祖国不同的河流中，他们都说中国大马哈语但是有着稀奇古怪的口音，原来每条河流的语言都有些许不同。

One pretty little Chinese chum salmon fry, named Ruirui, told him how she had just come downstream from the Songhua River through Harbin, and asked him if he had seen the new Wanda Mall on his way downstream. The new mall was so big and beautiful and had so many colorful lights she could it see from the river.



其中一只漂亮的中国大马哈鱼苗叫瑞瑞告诉他，她来自流经哈尔滨的松花江下游，还询问他有没有在往下游去的过程中见过万达茂。这个商场特别的大而又华丽，有着许许多多她从来没在河流里见过的灯光。

He did not know what she was talking about as he had come down the Heilongjiang River not the Songhua River and what was a mall anyway?

他不知道她在说些什么因为他来自黑龙江而不是松花江，再说了商场是什么？

No matter, he just smiled and nodded his head anyway since he did not want to seem like a backwards country chum salmon fry. But he began thinking about all those pretty coloured lights she had seen which started to make him feel very, VERY hungry. He did not know why, but he started to dream of big, juicy coloured things that tasted delicious and were known as **JELLYFISH!**

无论如何，他微笑着点了点头因为他不想被看做是来自落后国家的小大马哈鱼。但是当他开始去幻想这些她所描述的灯光，他开始感到非常的饥饿。他不知道为什么，但是他开始去幻想一种巨大的多汁的色彩斑斓的好吃的东西，好像是-水母。

Many of the other chum salmon fry in the big school came from the Russian rivers and they talked a different chum salmon talk which Big Xin could not understand. But they were all still chum salmon so everyone travelled as friends down the river and without making a sound, they told jokes by wiggling their tail fins and making funny faces which made all the chum fry laugh.

其中还有许多大马哈鱼封口苗的鱼群来自俄罗斯的河流中，他们说着不一样的大马哈语，而大新是不能理解的。但是他们始终也不过是大马哈鱼，所以每个人都像朋友一样继续旅程，即便沟通是无声的。他们通过摇摆尾巴，做鬼脸等幽默诙谐的行为逗笑了整个鱼群。

The Big Blue Ocean

浩瀚无垠的海洋

Little Xin finally got to the great Pacific Ocean on the first day summer, June 21, after two long months of swimming, eating, swimming, eating, and swimming.

小新终于在夏季的第一天，6月21日抵达了一望无际的太平洋，在游呀游，吃呀吃中已经过去了两个月。

After the muddy water of the Heilongjiang River the first thing he noticed about the ocean was the water was so clear and blue. It also tasted funny. This was the first time Little Xin had tasted the salty water of the big ocean and after a while he began to like that taste very much. (5)

他注意到的第一件事是大海如此清澈湛蓝，和黑龙江水的浑浊度有着明显的区别。而且唱起来也很奇怪。而这是小新第一次品尝到海洋中的咸水，不久之后他渐渐喜欢上了这种味道。



After he had been in the ocean only a short while with his many silvery chum salmon fry friends he saw something new coming toward him. Perhaps this would be his first new friend in the ocean? This friend had pretty big eyes, and long dark hair, and a beautiful sleek body and a long, droopy, whiskers and a very nice, wide smile, with big shiny white teeth. (6)

仅仅在海洋中待了不久之后，他和他银色的大马哈鱼苗伙伴们看到了一些新奇的东西向他们游来。可能这是他在海洋中的第一个新朋友？这个朋友有着大眼睛，长长的暗色毛发，光滑的身体，长长的垂下的胡须以及大大的微笑中带着的闪亮的大白牙。

He remembered that big teeth might not be that friendly to him so when the big sea lion began to open his mouth to say something, little Xin dove quickly to the bottom of the ocean and was too scared to watch what the sea lion was doing to all his chum salmon

fry friends. He hid in the sea weeds on the bottom most of the day until Mr. Sea lion had swum away to look for other young chum salmon he could welcome to the salty ocean.

他回忆起了那巨大的牙齿可能对他不是那么友好，所以当大海狮开始张开嘴说点什么的时候，小新迅速地潜游到海洋深处，他被海狮对自己的朋友所做的事情吓住了。直到海狮先生游开去寻找其他年轻的大马哈鱼并表示“欢迎”来到海洋之前，他几乎一整天都待在海藻中间。

After many months of swimming, eating, swimming, eating, swimming Little Xin found himself out in the middle of the great Pacific Ocean. There he did not have many worries and most of the time he was all by himself. The ocean is very large and all his chum salmon friends has spread out all across its big blue surface. 在许多个月的游泳和进食之后，小新发现自己现在处于浩瀚的太平洋的中间。在那里他并不需要担心太多而且大多数时间他都是一个人。海洋是辽阔的，而他所有的大马哈鱼朋友们都分散在这湛蓝的表面下。



Once in a while he did see a very large salmon shark, with very big teeth, that liked to swallow chum salmon if he could catch them. Little Xin would easily swim away so as long as he saw the shark before the shark saw Little Xin. Little Xin had learned the lesson about staying away from big teeth. (7)

他时不时会看到带有巨大牙齿的大鼠鲨（或鲭鲨 salmon shark 三文鱼鲨属 Lamnidae 鼠鲨（鲭鲨）科，我的书上把它译为鼠鲨，但是国外更多的把这类鲨称为 Mackerel Shark 鲭鲨，用哪个翻译你们决定），大鲨鱼看似喜欢吞吃任何抓得到的大马哈鱼。小新在鲨鱼看到自己之前就立即游开了，小新已经学到了远离大牙齿这重要的一课。

On quiet nights he would listen to the songs of the great whales as they migrated south to their warm winter waters. The big male Humpback whales had the best songs that could go on for hours and hours and hours and he never got tired of listening to them.

安静的夜里，他会聆听鲸鱼洄游到南边温暖水域发出的歌声。巨大的雄性座头鲸（驼背鲸，直译是驼背鲸，按照日语和常用名为座头鲸）能发出最美妙的天籁，并且长达数个小时，而他也从不为倾听感到疲倦。



He would sometimes watch the big ships at night moving things back and forth between Canada and China. The big container ships with their twinkling lights and steady thrum..thrum..thrum of their engines playing a steady beat along with the high-pitched melody from the whales would make a symphony of sound and lights for the great pleasure of Little Xin. Some days it was very fun to be a chum salmon out in the middle of the Pacific Ocean.

有时他也会在夜间观看大船在中国和加拿大之间往返运送货物。巨大的货柜船有着不停闪烁的灯光和稳定的引擎发出的节拍声，配合着鲸鱼发出的高音旋律，一场光和声的交响乐带给小新无比的欢乐。



Little Xin loved to swim up to the surface of the ocean at night when there were big storms making big waves. He would swim into the waves and surf along with the wild and white breaking waves flashing silver in the moonlight. When he got tired of that he would dive down deeper in the ocean and look for his favorite food... **JELLYFISH!**

He could eat jelly fish all day and all night and was very happy.

小新还爱在晚上游到暴风掀起风浪的海洋表层。他也会游到波浪中间，月光照耀下，在闪烁的白色浪花间冲浪。当他感到疲倦时便会下潜到海洋深处并寻找他最喜爱的食物-水母。他可以高兴地整天整晚享受着美味的水母。

He ate so many jellyfish and shrimps and other wiggly things he grew very fat and very big. Chum salmon love to eat and they grow from a small fish (as short as your little finger) to a very large fish (as long as your leg) in only a few years in the ocean. (8)

他吃了太多的水母，虾以及其他摇摆的东西所以他长得非常肥硕。大马哈鱼进食量很大，在短短数年间他们从小鱼（短小到和你的小拇指一样）到非常大（和你的腿一样长）。



After four years of doing this he was not Little Xin any longer. He was now Big Xin and he now wanted to go back home to the Huma River, where he had been born, four years before.

就这样过了四年后，小新已经不再小了。他现在是大新了，而且他想回到自己四年前出生的家乡呼玛河。

Big Xin

大新

Out in the middle of the big blue ocean it is very peaceful place but there is a problem if you want to go home. Big Xin could figure out what was up and what was down, the sky was up and the deep dark ocean was down. But which direction was home since he knew it wasn't up in the sky or down at the bottom of the ocean?

在湛蓝的海洋中间是很平静的，但是想要回家有一个问题。大新可以搞清楚什么是上什么是下，天空是上，深海是下。但是哪个方向是家呢？家既不在天上也不在深海中。

There are no signs that tell you the way home when you are in the middle of the big, blue ocean. There is no mountain to look toward and follow back to home. There are no roads, no railways, no airports, no trucks, no cars or no buses that can take you back home.

在宽广辽阔的海洋中间，没有路标告诉你哪里是家的方向。没有可以循着前行的山峰。没有道路，没有铁路，没有机场，没有卡车，没有汽车或者公交车能带你回家。

Big Xin really wanted to go home but he was not sure how to do that. Then he remembered what his mother had whispered in his ear, when was just a little egg as she tucked him gently into his stone bed at the bottom of the river. “Son, look to the sun and where it rises in the morning, travels during the day, and then goes down at night.

(9)

大新很想很想回家，但是他不不确定怎么做。但是他记得他的母亲（他的母亲叫瑞瑞）在耳边的低语，当他还是卵的时候，母亲温柔地把他盖进河底的石床中。“孩子，向太阳升起的地方看去，白天旅行，夜间潜游。”

Go in the direction of the sun when it is half way between lunch and dinner and this will lead you south and west back to an island. You need to follow the shores of this island to the north and then turn first to the west and then back to the south and you will come to the place where the Heilongjiang River enters the ocean. So Big Xin became very happy thinking about what his mother had told him and headed off toward the south and west looking for the island his mother had mentioned so many years ago.

在午餐和晚餐正中间的时间，朝着太阳游，这会把你引导至西南方的一个小岛上。你需要顺着这个岛屿的岸边向北游，然后在第一个路口向西，再然后向南你将会到达黑龙江的入海口。所以大新高兴地思考着他母亲说的话并转向西南方去寻找他的母亲四年前提到的岛屿。

As he began his journey home Big Xin began to meet other chum salmon also heading home from the big, blue ocean. After a while he was once again in a great, big school of chum salmon heading south and west. It was so nice to be back again with friends and he forgot how nice it was to be swim in a school of silvery chum salmon.

在他开始自己的旅程回家途中，大新也开始偶遇其他从海洋中回家的大马哈鱼。不久后，他又再次加入到了一群向西南方迁徙的鱼群。能回到朋友的身边是多么美好，而他甚至都快要忘记游在一群银色的大马哈鱼中间的感觉了。

His new friends spoke many languages, but he did not care about all these different chum salmon talk he was just happy to be going home. Most of the chum salmon spoke Japanese or Russian some spoke Korean and to his delight some of them spoke Chinese chum salmon talk.

他的新朋友们说着许多语言，但他不在乎这些不同的大马哈语，他只是高兴地想着回家。绝大多数的大马哈鱼说着日语，俄语，还有一些说韩语，当然令他高兴的是一些说着中文。

New Friends

新朋友

He made two new friends (Jiaying and Yuechan) during his journey to the island. Jiaying, who was just three years old and little younger than Big Xin, who was four, was from the Wusuli River, a tributary of the mighty Heilongjiang River. Wusuli Jiaying was also a little shy. But when she did talk, it was in a little different way than the other Chinese salmon.

在前往岛屿的旅途中，他交了两个新朋友（佳莹和月婵）。佳莹是一条三龄鱼稍微比四龄的大新年轻一些，她来自浩瀚的黑龙江的支流-乌苏里江。乌苏里江的佳莹也有些腼腆。但是当她说话时，和其他中国的三文鱼略有不同。

She kept saying “COOL”. “COOL” this, “COOL” that, “COOL” everything and when she said “COOL” she said it in American English. So Big Xin asked her why she talked that way.

What Wusuli Jiaying told him is that when she was all alone in the middle of the big blue ocean she got sort of lonely. With nothing better to do she kept swimming east, far, far across the big sea. After a long, while she came upon a big school of chum salmon which made her very happy.

她不停地说着“酷，酷，酷”，这个“酷”那个“酷”，而且当她这样说的时候是带着美式口音的。所以大新问她为什么要这样说话。

She had made some new friends. These were North American salmon and all she heard all day long was “COOL” this, “COOL” that and “COOL” everything.

她交到了新朋友。这些是北美的三文鱼而她每天所听到的是这个“酷”，那个“酷”，所有事情都很“酷”

They talked and laughed a lot, like North Americans do, which suited her since she was Chinese and like to talk and laugh lot too, and they told a lot of jokes...which were very COOL. Anyway, that is why she talked a little different and after a while both he and Yuechan started to talk that way too! (10)



他们在一起欢快的聊天，就像北美的人一样，而这和她也很配，因为她来自中国而人们也喜欢交谈和开怀大笑，他们互诉了许多笑话，而且都很酷！总之，这就是为什么她说话时有些不同，而且不久之后她和月婵都开始这样说话了！

Yuechan was from a river called the Suifen River and liked to talk a lot, even to herself sometimes. This made him happy as Big Xin was sort of shy and did not talk much but he was a good listener.

月婵来自一条叫做绥芬的河流，而且很善言辞，甚至是自言自语。这让月婵很高兴，但是让大新稍显害羞并且不再多说话，但是大新是一个很好的倾听者。

The Suifen River flows into the ocean near the Port of Vladivostok in Russia, but the river starts in the mountains of China near the City of Dongning, and that is where Yuechan came from. Yuechan was so excited to be going back home.

(11)

绥芬河在海参崴的港口附近注入海洋，但是这条河流起始于东宁附近的中国境内的山峦之间，而那里是月婵的家乡。月婵对回家特别的兴奋。

She remembered her time being a little egg laying beside many other eggs in a brilliant blue bed. The colour blue of her bed was as bright blue as a hot summer days sky. She also remembered the kind black eyes of her guardian who took care of her when she was very small.

她记得她仍是小鱼卵的时候，和其他鱼卵一起躺在闪耀的蓝色河床上。她床上的蓝色正如夏季天空一般光亮。她还记得她非常小的时候，她的守护者慈祥的深黑色眼瞳。

What she did not know was that she had been born in the Dongning Salmon Hatchery located on the Suifen River. The kind black eyes were those of the Salmon Hatchery Manager, who took care of her day and night until she was released as a small fry during April in that river. All she knew was she wanted to go back to where she was born. (12)

而她不知道的是她出生在绥芬河上的东宁三文鱼放流站。慈祥的黑色眼瞳是三文鱼放流站长的，他不分昼夜的照顾她直到四月份鱼苗放流。她所知道的全部就是想要回到出生的地方。



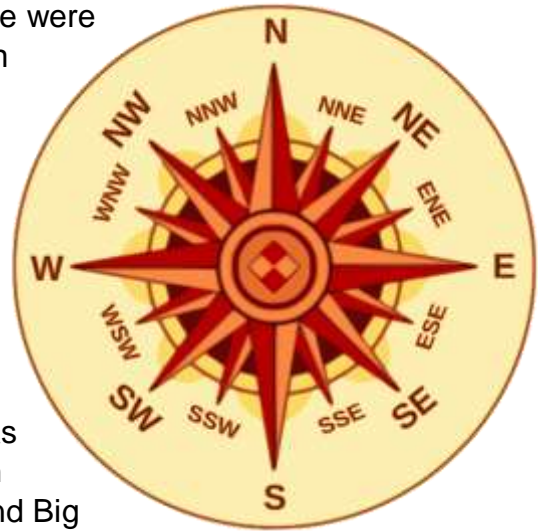
After days and days and weeks of swimming, the three new friends came to the shores of a big island. We know this island as Sakhalin Island and it is part of Russia. When Big Xin arrived at the shores of the island, he again remembered something else his mother had told him so long ago. She said “follow your nose and go in the direction that you think is north, you will be right”.

在数天，数周的游动之后，我们知道这个岛屿是俄罗斯的一部分叫做萨哈林岛（库页岛，这个你们决定）。当大新到达岛屿的海岸，当再次回忆起了母亲很久之前的话。她说：“跟着你的鼻子向你所认为的北方游去，你会是正确的”。

What Big Xin did not know was that at the end of his nose were little crystals called “magnetite” which told his very small brain which direction north was. His brain kept this secret from Big Xin, but it knew and his mother knew. Mothers are always right!!!!

大新所不知道的是他鼻子的末端有着很小的叫做“磁铁矿”的结晶，从而传递给大脑哪里是北方。他的大脑隐瞒了这个秘密，但是大脑和他的妈妈都知道。母亲总是正确的！

So Big Xin turned his nose to the north, or at least he thought so, and he noticed his big school of chum salmon was not so big anymore. The Japanese and Korean chum salmon had kept going south heading for their own home streams, and Big Xin was once again surrounded by Russian and Chinese chum salmon friends, including Wusuli Jiaying. (13)



所以大新将鼻子朝向北方，至少是他所认为的北方，他发现大马哈鱼的鱼群不再庞大。日本和韩国的大马哈鱼还要继续向南到它们家乡的河流中，而大新再一次被中国和俄罗斯的大马哈鱼包围了起来，包括乌苏里江佳莹。

But one of his new friends was gone. The last thing he heard Yuechan say, as she had turned to the south and west and who was now swimming very fast to the mouth of the Suifen River, excited to be going home was...“COOL”!

但是他的一个新朋友已经不在。在月婵急速地游向西南方绥芬河入海口之前，他听到月婵说的最后一件事是兴奋地回到家乡很“酷”！

After a few days of swimming north the chum salmon school first turned west around the northern tip of Sakhalin Island, before heading south down to the mouth of the big Heilongjiang River. Salmon have a wonderful sense of smell so Big Xin soon smelled the Heilongjiang River and it smelled like the way home.

在数天的向北游动之后，大马哈鱼群在萨哈林（库页岛）向南游向黑龙江入海口之前，第一次向西转向了。鲑鱼有着精妙的味觉，所以大新闻到了黑龙江而且闻起来就像家一样。

The Mighty Heilongjiang

伟大的黑龙江

As Big Xin smelled the sweet smell of the mighty Heilongjiang River he also became aware of other Chinese salmon talk voices swimming beside him in the big school of chum salmon. There was Tianhang, and another Jiaying from the Songhua River near Harbin that joined him and Jiaying, from the Wusuli River from near Fuyuan City. (14)

在他闻到浩瀚的黑龙江的味道的时候，他同时也注意到鱼群中在他身边畅游的鱼儿们的中文口音。这其中有天航，还有另一个佳莹，她在哈尔滨附近的松花江上加入了队伍中，而她来自抚远市的乌苏里江附近。



Heilongjiang River

As soon as she saw him swimming over to her, Songhua Jiaying gave him a big, beautiful smile and flashed her side fins in a way that said “Peace Brother- Welcome”. He had found a new and interesting friend.

当她看到新游向她时，松花江的佳莹给了他一个大大的甜美的微笑，不断地挑动着侧面的鳍好像在说：“安全着陆-欢迎”。新找到了一个有趣的新朋友。

He did find it confusing however that there were so many Chinese chum salmon named Jiaying. He thought maybe their mothers must have all talked about the small fry they were going to have after they had spawned when they were all travelling together in the big schools of chum salmon, so many years ago. He guessed Jiaying was a popular name back in their mother's time. Anyway, Big Xin was the only chum salmon he could find from the Huma River but he did not mind because he had his new friends for company.

他发现这很蹊跷，许多中国的大马哈鱼都叫做佳莹。他觉得一定是许多年前她们的母亲在鱼群中一起洄游时讨论她们生下的小鱼苗时决定的。他猜测在她们母亲的年代，佳莹一定是一个很有人气的名字。总之，新发现只有他自己来自呼玛河，但是他并不介意因为他在旅程中有了新的朋友。

Around this time Big Xin noticed something about all his new chum friends, they were not all silver anymore. They all were getting vertical stripes like a green and purple tiger. Green stripes and purple stripes it all looked so pretty. (15)

在这个阶段中，新发现他的大马哈鱼新朋友们上发生的一些事，他们不再是银色的了。他们的身体逐渐变得具有竖着的条纹，就像一条一条绿紫相见的大老虎。绿条纹，紫条纹看着都很漂亮。



Big Xin did not have a mirror so he did not know he was also turning different colours of green and purple and silver. The chum salmon were now turning their spawning colours and he sort of liked it.

新没有镜子所以他不知道自己也变得拥有了绿色，紫色和银色。大马哈鱼身上逐渐开始变得有产卵色而且他对这种颜色有几分喜欢。

As the big school swam into the mouth of the Heilongjiang River, which is in Russia and known there as the “Amur River”, everyone was so excited to be going home. All the chum salmon started to sing Chinese and Russian songs from their home rivers because they were so happy.



庞大的鱼群游进了位于俄罗斯的黑龙江河口，这里被称作“阿穆尔河”（这句话决定删除或否），每个人都非常兴奋终于可以回家了。所有的大马哈鱼都非常高兴，并开始唱着来自家乡的中文歌曲。

Just about this time Tianhang noticed a long wall that you could see through but could not swim through coming into their view. This wall was the first big nets of the large salmon trap that lies at the mouth of the Heilongjiang River and Tianhang knew that these nets were like big teeth and should be avoided at all costs.

就在这时，天航发现了一道长长的可以望穿但是游不过去的墙进入了他的眼帘。这道墙是黑龙江河口巨大的三文鱼陷阱的第一道大网，而天航早就知道这些网就像是巨大的牙齿而且应当不计一切代价躲避。

“Turn around, swim back downstream and go around the net” Tianhang cried. He had been told by his father to avoid these large salmon traps or else he might end up on someone’s plate for dinner. Go back..Go back..Go back..he cried. Most of the school just kept on swimming.

天航咆哮着：“转向，向下游去离开渔网”。他被自己的父亲告知一定要避开这些巨大的三文鱼网否则他可能将会成为其他人的盘中晚餐。他不停地哭嚎着：“向后退，退”但是鱼群的绝大多数仍然向前游。

The Russian chum salmon thought he was just singing his special rivers song and did not understand his words and most of the other chum salmon in the school were too far ahead to hear him. So, the little school of Tianhang, Jiaying, Jiaying and Big Xin were the only salmon to escape the big salmon trap that day as they swam around the trap and swam quickly upstream along the Heilongjiang. (16)

俄罗斯的大马哈鱼以为他只是在歌唱家乡的特殊歌曲，他们并不理解他所说的话而鱼群中绝大多数的大马哈鱼已经游地离他很远了。所以，天航，两个佳莹还有新所组成的小鱼群是那一天仅存的逃离了马哈鱼网的大马哈鱼们，他们迅速地绕开了渔网并快速地向黑龙江上游游去。

Fuyuan

抚远

After about one month of swimming upstream against the powerful current of the Heilongjiang River the little school of Chinese salmon swam by the last Russian city of Khabarovsk and they began to smell the waters of the Wusuli River which entered the mighty Heilongjiang just at the China-Russian border, just downstream from the Chinese city of Fuyuan. The Wusuli River enters the Heilongjiang River exactly 876 kilometers from the big blue ocean.

在向上游逆着强大的水流游了大约一个月之后，这一小群大马哈鱼通过了最后一个俄罗斯城市-哈巴罗夫斯克（伯力）而且他们开始闻到中俄交界处乌苏里江汇入浩瀚的黑龙江的水流的味道，而这里就在抚远市的下游。乌苏里江和黑龙江交汇处恰好位于距离湛蓝大海 876 公里远。

Wusuli Jiaying, who was only three years old and junior member of the school of friends, was particularly excited because she started to smell the Wusuli River she was released into as a little fry. But she also smelled Chinese noodle soup coming from all the Chinese fisherman having lunch along the river and washing their bowls in the water.

乌苏里江的佳莹只有三龄，是鱼群中的年轻人，她表现得最为激动因为她开始闻到乌苏里江水的味道，而这正是她作为封口苗被放流时水的味道。她还闻到中国的面条汤的味道，而这来自江边渔民午餐后在江里洗碗的味道。



The Fuyuan Salmon Hatchery Manager used to like to have noodle soup for lunch. Just like Yuechan, Wusuli Jiaying was also born in a salmon hatchery. Once in a while after he had his lunch the Hatchery Manager would check on the little eggs to see if they were doing fine and were healthy. He sometimes would put his hands in the water to gently brush away some dirt that had settled on top of his precious incubating salmon eggs.

抚远放流站站长曾经非常喜欢午餐吃面。和月婵一样，乌苏里江的佳莹也出生于大马哈鱼放流站。放流站站长偶尔在午餐之后检查鱼卵的情况，确保它们的健康状况。他时不时地把手放在水里，轻柔地拂去珍贵的鱼卵上盖着的污物。

Because salmon have such a wonderful sense of smell all the little eggs could smell on his fingers what he had for lunch. To them the smell of Chinese noodle soup was the smell of love from their protector and guardian, the Salmon Hatchery Manager.

由于三文鱼异常灵敏的味觉，所有的鱼卵都能够从他的手指上闻到他午餐的味道。对于他们来讲，中国的面条味道就像保护他们的守护者-放流站站长爱的味道。

One minute, Jiaying was talking about going home and the next minute she was gone. She had turned and was now swimming fast up the Wusuli River looking for her home village at the hatchery. (17)

佳莹刚刚还在畅谈着自己的家乡，而下一分钟她就消失了。她转向并急速地游入了乌苏里江去寻找自己的故乡和放流站。

Before the three remaining chum salmon friends had a chance to notice where Jiaying had gone and say good-bye they saw something coming toward them that had not seen before.

在三个大马哈鱼朋友注意到佳莹游去的方向并说再见之前，有什么他们没见过的朝向他们的东西出现了。



A glimmering, shimmering, wall of translucent filaments was moving gently through the water toward them. They thought it must be a school of little insects or little fishes all flashing together to make this beautiful sight.

一道闪烁的光亮的透明的墙轻轻地从水中向它们驶来。他们以为这一定由一小群昆虫或者小鱼组成的漂亮景色。

When Big Xin nose touched the first filament it pushed back and caught the corner of his mouth. Instantly Big Xin knew this was something he might not like and he began to turn downstream. Just for a moment the clear filament pulled at the corner of his mouth and pulled him closer to this wall of little lights. He got scared and twisted backwards

and pulled away from this wall and swam up, up, up into the light and leapt high into the air. (18)

当新用鼻子触碰到第一个小纤丝时，丝迅速地向后退并且擒住了他的嘴角。新立即发现这是可能不是他喜欢的东西而迅速地游向下游。不一会，透明的丝抓住他的嘴角并把他拉进墙里的细小窗户。他非常害怕，扭动着向后退，不停地向后游啊游，最后跳的很高跃入空中。

He saw the fishing boat and a lot of little floats on the water below him but he did not care he just landed in the water above the net and kept swimming upstream very fast. His two friends who were behind him saw what he had done and also leapt high into the air and jumped right over the salmon gillnet that was now catching many salmon behind them. Never again would the three friends go near a salmon gillnet, or a salmon trap or big teeth, they simply wanted to go home.

他看到了渔船以及水面上密密麻麻的浮漂，而他对此毫不在乎，他进入水中继续快速地向上游。他身后的两个朋友看到了他所作的，他们也高高地跃出了水面并跃过了这些捕捞他们身后三文鱼的刺网。这三个朋友再也不想接近三文鱼刺网，或者陷阱，或者巨大的牙齿，他们只是单纯地想要回家。

Alone

孤独

Two weeks later the three friends were now approaching the mouth of the large Songhua River. The Songhua River enters the Heilongjiang River exactly 1087 kilometers from the big blue ocean.

两周后三个朋友开始接近松花江口。松花江和黑龙江的交汇处距离湛蓝的海洋恰恰在1087公里处。

Songhua Jiaying and Tianhang, who was five years old and senior member of their little school of friends now had to say goodbye to their new friend because the Songhua was their home river and that was where they had to go.

松花江的佳莹和天航都是五龄鱼，是这一小群鱼中年老的，而他们是时候和新朋友说再见了，因为松花江是他们的家乡河流也是他们必须去的地方。

Tianhang had been born in a clear groundwater stream along the Songhua River somewhere upstream from the City of Harbin but below the City of Jilin. Jiaying had been born in the Nenjiang River which joins the Songhua River just upstream from Harbin. The two of them had to leave Big Xin and travel up the Songhua to their home villages.

天航出生在松花江干净的地下水河流，位于哈尔滨上游，吉林下游处。而佳莹出生在嫩江，这位于松花江向哈尔滨的上游一点点的位置。他们两个必须离开新向松花江的家乡而去了。

Big Xin said goodbye to his two friends and he really wanted to go with them but he really had to go back to the Huma River, his home. So, he did not turn into the Songhua River with them but swam quickly forward continuing up the Heilongjiang River, all alone again.

新在和两个新朋友道别后，即便他非常想和他们一起走但是他必须回到自己家乡的河流呼玛河。所以他没有和他们一起转入松花江而是迅速地继续向黑龙江上游前行，再次变得孤独了起来。

What Tianhang and Jiaying did not know that the way back to their home had been blocked some two years ago by a big concrete mountain called a hydro-electric dam that had been constructed across the Songhua River just below the city of Harbin.



天航和佳莹所不知道的是回家的路上在两年前被巨大的水泥山挡住了，巨大水利坝就修在哈尔滨下游横跨于松花江上。

So, when they swam up to the dam and it became clear they could not jump over the dam, or swim under it or around it, they simply waited. (19)

所以他们游到了坝下，他们很清楚自己不可能跃过去或者从底下或旁边绕过去，他们只是等待着。

They waited and waited and waited for the concrete mountain to move aside and let them swim pass. After a while they simply drifted slowly downstream in the river flow, heartbroken and sad, dreaming of the home they had lost and would never see again. They would have to find another place to make their new home that did not have a concrete mountain in the way.

他们等待着等待着混凝土的大山移动到一边并让他们通过。不久之后他们慢慢地飘逸到河流的下游，他们悲伤地心碎了，在梦里想着他们失去的家乡并且再也看不到了。他们必须去找寻另一个路上没有混凝土大山地方作为新家。

Big Xin, after two weeks of swimming, swimming, swimming up the Heilongjiang, swam past the City of Heihe one night. This City lies on the banks of the Heilongjiang River exactly 1731 kilometers from the big blue ocean.

在两周之后，新向着黑龙江上游游啊游，进过了黑河市。这个城市距离湛蓝的海洋 1731 公里远。

He could not stop staring at the beautiful the bright lights of the City reflecting in the water as he passed. The white, yellow, green, red and blue lights reminded him of the delicious white, yellow, green, red and blue **JELLYFISH** he used to enjoy eating so much when he swam in the big blue ocean.



在他经过时，他情不自禁地驻足观看美丽城市闪烁的映在水里的光芒。白色，黄色，绿色，红色和蓝色的灯光使他回忆起他曾经在湛蓝的海洋中享受过的美味的白色，黄色，绿色，红色和蓝色的水母。

Salmon do not eat anything after they leave the ocean but that did not matter, the lights still made Big Xin hungry and think of jellyfish. (20)

三文鱼在离开海洋后不再进食，而这并不是问题，但是灯光仍然使他感到饥饿并回想起水母。

With one last look at the delicious lights of Heihe, Big Xin pointed his nose upstream into the mighty Heilongjiang's flow and began swimming upstream to his home in the Huma River. About one week later he smelled it first. That smell that was un-describable, beautiful, exciting and made his heart beat faster and faster. He smelled the Huma River and he quickly swam upstream in the Heilongjiang and then turned left into the gentle flow at the Huma River mouth. He was home, and had not taken a bite to eat or even a nap for exactly 1945 kilometers since the big blue ocean. (21)

在看了黑河美味的灯光最后一眼之后，新继续向浩瀚的黑龙江上游湍急的水流而去，开始游向他的家乡呼玛河。大约一周之后他第一次闻到了。这种难以言状，美丽，兴奋，令他心跳加速的味道。在呼玛河入水口轻柔的水流中，他从黑龙江中向左转向了。他终于到家了，在经过了从海洋开始的 1945 公里的漫长旅程中，他不曾吃过一口，不曾睡过一次。

Hello, Anybody Home

嗨，有人到家了吗

At first Big Xin was so happy to be in home river and he could not control his excitement. He jumped out of the water again and again and again until he got tired. Then he swam up the river and back down the river waiting to tell everyone he had made it back home. Not finding anyone to talk to he swam up a little side channel which he knew had a large village of Huma River chum salmon located at it top end.

一开始，新极其高兴回到了家乡，他控制不住自己的兴奋之情。他无数次地跃出水面直到疲倦。然后他在河流的上游下游之间不断地游，想要告诉别人他回到家了。没有找到任何可以说话的人，他向上游去，去寻找一个他知道曾经有着许多呼玛河大马哈鱼的村落，而这位于一个旁渠的上游尽头。

His mother had told him this village was one of the largest on the river in years gone by, with thousands and thousands of chum salmon all spawning together in some years. As he swam up this little stream he smelled the comforting scent from the many seeps and springs of water that had come out of the ground all along its banks.

(22)

他的母亲告诉过他这个村落是这条河在多年以来最大的村落，某些年中数千条大马哈鱼在一起产卵。在他向上游去的过程中他闻到了河流两侧中涌出的泉涌散发出的香甜舒适的味道。

This is called an aquifer where water from rain and snow and the river and goes into the ground, is warmed up by the earth and then pops back up to the surface to run back into the stream. Chum salmon love to spawn near groundwater which keeps their eggs warm and happy all through the long, cold winters. (23)

这被称作蓄水层，雨水、降雪、河流的水流进土地中，被地球加热后涌出到地表并回到河流中。大马哈鱼特别爱在地下水附近产卵，而这样可以让他们的卵保持温暖，从而开心地渡过漫长严寒的冬季。

“Hello, anybody here” he sang, and waited for a reply. Silence only silence, all he heard was a freshwater clam burping after eating too much muck for lunch. Where had everyone gone?

他歌唱者：“有人吗”，等待着回答。只有沉寂，他所听到的只有一只淡水蛤在滤食了太多淤泥之后发出的饱嗝声。大家都去哪里了？



Coming around a corner he saw a big red banner that looked like it had been just put up yesterday. What Big Xin did not know was the banner had been raised by scientists that were doing a study trying to understand where all the chum salmon had gone and how they might be able to get them back. But Big Xin did not know this and looked and looked and looked but no chum salmon were there. (24)

在一个角落他看到了一个红色的横幅，看着就像在昨天被竖起来的一样。而他不知道的是横幅是科学家竖起来用作科学研究去理解大马哈鱼消失到哪了，以及怎么样把他们再带回来。但是新不知道这些，他不停地找呀找，但是那里没有任何大马哈鱼。

Lonely Xin

孤独的新

After a while Big Xin slowly swam back down the little side channel and up the main Huma River to look for other chum salmon villages as he went. He wanted to tell someone, anyone, so much, he was home and hear the funny Huma River chum salmon talk dialect he had not heard for the four long years he had been away. Where was everybody?

不久之后，新慢慢地从小旁渠中向后游，退到了呼玛河主干中去找寻其他他所期望的大马哈鱼村落。他想要告诉一些人，任何人，太多太多的事情。他已经四年没有听到那滑稽的呼玛河大马哈鱼方言，而现在，大家去哪了？

Off to one side he came to another side channel that in years past, had held a famous chum salmon village his mother had told him about. The entrance to the channel was now blocked by a dyke and what he did not know was that stone eating machines had eaten all the stones in the chum salmon village and it had been destroyed. (25)

离开这一侧他来到了另一个他母亲曾经告诉过他很有名的三文鱼旁渠中。进入渠中的入口被一个防洪坝阻挡住了，而他所不知道的是一台吃石头的机器已经吃掉了大马哈鱼村落中所有的石头，村落已经被毁了。

So Big Xin continued up the Huma River a little farther.



所以新继续向呼玛河深处游去。

He came to the first village in the main Huma River which was simply a small mountain of stones piled up above the river bottom by hundreds and hundreds of chum salmon spawning in the same place year after year, decade after decade, century after century and millennia after millennia.

他到了呼玛河主干上的第一个大马哈鱼村落，那里的河床上有着石头堆砌成的小山，而这些是由数以百计的大马哈鱼在相同地区一年又一年，十年复十年，世纪再世纪，千年更千年的产卵后形成的。

These little mountains of stones are called “salmon spawning dunes” and when you find them you know they have been made by the tails of salmon over a long time. Nobody home there either. (26)

这些石头小山叫做“三文鱼产卵沙丘”，而且当你发现了它们的时候，你就知道它们是由三文鱼的尾巴经过很长很长时间之后造出来的。而那里也没有任何人。



Day after day Big Xin visited village after village and always there were no chum salmon to greet him. At one village far upstream, one little fish told him that one day there was going to be a concrete mountain built all across the river at that point. Big Xin knew if this happened he would not be able to swim to the chum salmon villages upstream anymore.

日复一日，新探访着一个又一个的大马哈鱼村庄，然而没有一处有大马哈鱼向他致以问候。在上游的一个村庄里，一条小鱼告诉他，在未来整条河流上都会有混凝土的大山建成并横跨在河流中。新知道如果这发生了他绝无继续向上游寻找大马哈鱼村庄的可能。

He was so lonely and so sad and did not know how this could be true. How could a river with thousands and thousands of chum salmon in years past now have none left? (27)

他是那么的孤独，悲伤，并且不知道怎么会这样。一条曾经有成百上千的大马哈鱼的河流现在怎么一条都没有了呢？

Was he the last Huma River chum salmon?

他自己是呼玛河最后一条大马哈鱼吗？

Were too many caught in the salmon fishing nets?

是因为太多太多被三文鱼网抓住了吗？

Were too many eaten by big teeth?

是太多被大牙齿吃掉了吗？

Did the stone eating machines eat up the last villages used by chum salmon?

是吃石头的机器吃掉了最后的大马哈鱼村庄吗？

Was there a concrete mountain somewhere on the river which stopped the last chum salmon from going home?

是因为某处的巨大混凝土大山彻底挡住了大马哈鱼最后的回家路吗？

Just then Big Xin smelled a faint hint of wild rose in the river water as it tickled its way past his nose. Salmon have a wonderful sense of smell and they can smell chum salmon from their very own home rivers. Chum salmon from the Huma River smell like wild roses blooming on a warm June day along the river banks, and Big Xin smelled roses.

就在这时，新在河水中闻到了淡淡的野玫瑰味道在他游过去的时候轻轻地挠着他的鼻子。三文鱼的味觉极其灵敏，他们能闻到大马哈鱼在自己家乡河流的大马哈鱼的味道。呼玛河的大马哈鱼闻起来像温暖的6月份河岸边开了花的野玫瑰，而新闻到了玫瑰味。

What could this mean, was Big Xin not the last Huma River chum salmon?

这意味着什么，新是最后一条呼玛河的大马哈鱼吗？

Could there be a secret village that the chum salmon still lived in the Huma River?

可能会有隐藏的大马哈鱼村庄仍然在呼玛河上么？

Could it be he was not truly alone?

可能他并不是真的孤独么？

So, with that thought Big Xin turned his big nose, with his sharp, hooked teeth and pretty green and purple stripes along his sides, upstream into the current of the Huma River and began to swim.

所以，大鼻子，尖尖的钩状嘴以及身体两侧漂亮的绿紫色条纹向呼玛河上游开始继续游动。

Lonely Xin was not going to stop swimming until he found out! (28)

孤独的他直到找到之前不会停止游动



Teacher Notes

教师的笔记

1. Chum salmon construct their nests in the stones at the bottom of streams. The female constructs a nest (also known as a redd) and deposits her eggs approximately 0.2 meters deep in a depression and covers the eggs with small stones using the action of her tail. This protects the eggs from predators, floods or ice. The female can lay up to 4000 eggs.

大马哈鱼在溪流河床底部筑巢。雌性所构筑的叫做巢穴（Nest 也称 Redd）将卵放在大约 0.2 米深的下陷处，用尾巴的运动将小石头覆盖住鱼卵。这可以把卵与捕食者，洪涝或者冰隔绝。雌性最多可产 4000 个卵。

2. Chum fry when they are ready to emerge from the nest under the stones begin to move actively along with the other chum fry close by. This moving action allows the mass of chum fry to rise up through the stones as the sand above falls down and opens up spaces between the stones. The chum fry swim up through the now open spaces between the stones and finally emerge into the river just above.

在周围有其他鱼苗时，大马哈鱼封口苗会从石头下上浮出并开始积极地活动。当鱼苗上方的沙子落在石头缝隙中打开空间时，这种积极地运动使得大量大马哈鱼从石头中浮出。大马哈鱼苗从现在打开的空间中游出最后浮到上方的河流中。

3. Chum fry migrate out to sea from March through July, almost immediately after they emerge from the nest and become free swimming young fish known as “fry”.

大马哈鱼在 3 月到 7 月中间洄游到海洋，几乎是在从巢穴中浮出之后立即成为自由游动的小鱼，这被称作“封口苗”。

4. Studies have shown that chum salmon from each spawning stream can be genetically distinguished from one another. The farther away one chum salmon stream is from another the more genetically different these two chum salmon populations are.

研究表明，在每个产卵季大马哈鱼在不同产卵河流的每一个种群都是基因上不同的。两个大马哈鱼产卵河流离得越远，这两个种群的基因差别越大。

5. Chum salmon are one of the salmon species most dependent on the river estuary. Chum salmon fry often feed for 2-4 weeks in the estuary (where freshwater from the river mixes with the saltwater from the ocean) before they move offshore into more saline oceanic waters.

大马哈鱼是鲑科鱼中几乎最依靠河流入海口的三文鱼。大马哈鱼封口苗通常在彻底离开海岸进入高盐度的海洋之前在入海口（即淡水盐水的海洋交界处）喂食 2-4 周。

6. Chum fry grow very quickly in the estuary habitat but high numbers of salmon fry in these areas during their spring migration attracts a large number of fish, bird and mammal predators such as Sea lions and seals.

大马哈鱼在河口成长的很快，但是大量的三文鱼封口苗在春季洄游季时聚集在一起会吸引大量的鱼类，鸟类和哺乳类的捕食者，例如海狮和海豹。

7. The salmon shark, Lamna ditropis, is a relatively large species (up to over 3 m) occurring in a wide area of the northern North Pacific and adjacent seas. In terms of predation on Pacific salmon and it has been regarded as one of the most important predators of salmonids in offshore waters.

鼠鲨（鲭鲨，三文鱼鲨）*Lamna ditropis* 是一个相对体型大的物种（超过 3 米），发现在北太平洋中很大的区域以及邻近的海洋中。至于对太平洋三文鱼的捕食，它被认为是远离海岸的地方最重要的鲑科鱼捕食者的一种。

8. Chum salmon are unique among the Pacific salmon as they consume large amounts of jellyfish when feeding in the open ocean. The stomach (but not intestine) of chum salmon (*Oncorhynchus keta*) is greatly enlarged relative to other species of Pacific salmon. This permits the exploitation of gelatinous zooplankton (jellyfish, ctenophores, and salps) as a major food source, which are an abundant but low energy prey unused by the other species of salmon.

大马哈鱼在太平洋三文鱼中很特别，他们在公海上进食大量的水母。大马哈鱼（*Oncorhynchus keta*）的胃袋（不是肠道）和其他的太平洋三文鱼比被扩的很大。这允许它们对胶质浮游生物的大量捕食（水母，栉水母和海鞘等）并作为重要的食物来源，这些动物丰度很高但是能量低，而且其他三文鱼并不以这些动物为食。

9. How salmon return to the correct shoreline region is not completely understood. It appears they use some form of “map and compass” navigation based on information about position and direction of travel. This information most likely comes from a suite of environmental cues, including day length, the sun’s position and the polarization of light that results from its angle in the sky, the earth’s magnetic field, and water salinity and temperature gradients.

三文鱼怎么回到正确的海岸线区域仍然是没有被完全理解的。看似是使用某种形式的“地图和罗盘”导航系统基于位置和方向。这些信息极有可能来自于合适的环境线索，包括一天的长短，太阳的位置和天空中阳光照射的角度，地球的磁场以及水的盐度和温度梯度等。

10. Asian chum salmon generally use the western portion of the North Pacific Ocean and the Bering Sea that lies to the west of 180 degrees longitude. North American chum salmon generally exist to the east of this 180 degrees longitude but in their later ocean years some Asian and North American salmon do overlap in their ocean distribution.

亚洲的三文鱼通常使用北太平洋西边和白令海的 180 度经线以西的部分。北美的大马哈鱼通常存在于 180 度经线以东，但是在它们海洋阶段的后几年，一些亚洲和北美的三文鱼确实在海洋分布上有重合。

11. The Suifen River headwaters are in Jilin Province, China. It then flows downstream through the China city of Dongning and crosses the international border and enters Russia. Finally, after flowing for another 120 km down from the border the Suifen River enters the Sea of Japan near the Russian port of Vladivostok. The Suifen and Tumen Rivers (which forms part of the China/North Korea border) are the only two salmon rivers in China that are not part of the large Heilongjiang River watershed to the north.

绥芬河发源自中国吉林省。然后流向下游到达中国的东宁市，然后穿过国境线进入俄罗斯。最后在国境线向下游大约 120 公里处的符拉迪沃斯托克（海参崴）注入日本海。绥芬河和图们江（是中国和北朝鲜边境的一部分）是仅有的两条并不是北方的黑龙江流域一部分的河流。

12. China has operated a salmon hatchery on the Suifen River for over thirty years. Many of the chum salmon still returning to Dongning each year are believed to be returns from chum salmon fry released from this fish hatchery.

中国经营的绥芬河放流站超过了 30 年。每年仍有许多大马哈鱼回到东宁，相信它们是从这个三文鱼放流站放流的。

13. Scientific research has suggested that the salmon use the Earth's magnetic field during their ocean migration to find their way back to the estuary of their home streams. There are small crystals of magnetite (the same material used in a navigation compass) found in cells within the nose of the salmon which are connected by nerves directly to the salmon's brain.

科学研究显示三文鱼在海洋洄游时使用地球的磁场找寻回到家乡河流的入海口的道路。这些小的磁铁矿结晶（和导航用的罗盘材质一样）被发现于三文鱼鼻子中的细胞里，而且直接连接到三文鱼大脑的神经里。

14. By the time returning adult salmon reach freshwater, they are guided largely by their sense of smell to their home river. Scientists demonstrated that young salmon fry become particularly sensitive to the unique chemical odors and smells of their home streams and all the streams they smell as they migrate to the ocean in the spring. Odors that the fry experience during their down stream river migration are stored in the brain as memories and the adult salmon remember these smells to find their way back to their home streams. In most cases the adult salmon are able to smell their way back to the exact area in the home stream where they were born many years before.

当成鱼抵达淡水，他们很大程度上由气味所指引从而到达家乡的河流。科学家描述为年轻的三文鱼封口苗在春季向海洋洄游时对独特的化学气味和家乡河流的味道非常的

敏感。封口苗在向下游去的过程中将气味存储在大脑中，成鱼记得这些气味从而找到它们家乡的河流。绝大多数成鱼能够闻到许多年前它们出生地的味道回到准确的家乡河流区域。

15. As the adult chum salmon approach the freshwater rivers they came from they slowly change colour from their ocean silver to a multi-coloured green and purple striped appearance. The males tend to have deeper and brighter colours than the females. The colours of freshwater chum salmon help them hide from their predators but also signal to other chum salmon they are ready to mate.

当成鱼接近淡水河流过程中，它们慢慢地从海洋中的银色改编为多个颜色的绿色紫色条纹。雄性倾向于显出比雌性颜色更深更亮。淡水大马哈鱼的颜色帮助它们躲避捕食者，而且也是对其他大马哈鱼展示出准备好交配的标志。

16. The largest fishery for Heilongjiang(Amur) River chum salmon occurs in and around its estuary. Large permanent salmon traps are operated that capture from 5-50% of the returning chum salmon to this river each year. In the early twentieth century Heilongjiang/Amur River chum salmon runs may have exceeded 30 million fish in some years. By the early twentieth century these runs have declined to less than 10 million chum salmon in most years.

最大的黑龙江（阿穆尔河）捕捞发生在入海口附近。巨大的永久性三文鱼陷阱可以每年捕捞 5-50% 的洄游三文鱼，有些年可以超过三千万条鱼。在二十世纪早期，这些洄游已经降低到了绝大多数年份都少于一千万条。

17. The Fuyuan Salmon Hatchery has been operated for more than thirty years. Adult chum salmon are collected in the Wusuli River, the eggs are incubated at the hatchery and the resulting chum fry are released back into the Wusuli River, the following spring during April-May.

抚远三文鱼放流站已经经营了超过 30 年。成鱼在乌苏里江上收集，鱼卵在放流站中孵化，封口苗在来年的 4-5 月放流到乌苏里江中。

18. The second largest fishery for Heilongjiang River chum salmon occurs in the vicinity of Fuyuan City primarily in the Wusuli River. Fisherman using small boats set long nets, known as salmon gillnets to catch the returning chum salmon during September and October. These light nets are almost invisible to the salmon as they swim upstream and when they swim into a gill net their heads go part way through the net and the fine filaments become hooked into their gill plates and they can not escape and are captured.

黑龙江上第二大的大马哈鱼捕捞发生在抚远附近乌苏里江上。渔民使用小船设置长网，也叫作三文鱼刺网捕捞 9-10 月份的洄游大马哈鱼。这些轻便的窗户状的网对大马哈鱼几乎是不可见的，当它们游到刺网中，它们的头部分游过了但是细小的丝线成为了鱼鳃的钩子，它们无法逃脱就被抓住了。

19. The Songhua River was once a major chum salmon spawning watershed in China. In many years in the past, thousands, perhaps millions of chum salmon would have returned to this very large river to spawn. Economic development over the past forty years made many of the spawning streams unsuitable for chum salmon. The construction of a large hydro-electric dam in the Songhua River just downstream from the City of Harbin, was the final act that largely eliminated chum salmon from this watershed.

松花江曾经是中国主要的大马哈鱼产卵河流。许多年以前，数千，可能数百万大马哈鱼会回到这个巨大的河流产卵。过去四十年的经济发展使许多产卵河流对三文鱼不再合适。哈尔滨下游松花江上巨大的水利坝的修建，是最后一个巨大的工程使得大马哈鱼从这个流域大部分灭绝了。

20. Pacific salmon do not eat any food once they enter freshwater and their stomachs shrink and become unable to digest food as they migrate upstream to their home spawning streams.

太平洋三文鱼在进入淡水后不再进食，它们的胃袋萎缩并且在向上游去家乡产卵河流过程中不再能够消化食物。

21. The Huma River is one of a number of chum salmon spawning streams known in the upper Heilongjiang River. The chum salmon of the upper Heilongjiang River were some of the longest migrating salmon in the world sharing this distinction with the Yukon River salmon in Canada. In both the Yukon and Heilongjiang Rivers salmon were known to have migrated up to 3000 kilometers to access to their home spawning streams.

呼玛河是黑龙江上游数个曾经为人知道的大马哈鱼产卵河流。黑龙江上游的大马哈鱼是世界上洄游距离最长的，和另一个很特殊的种群-加拿大育空河有着相似的特殊性。育空河和黑龙江河流的三文鱼都有着洄游 3000 公里以上回到家乡河流的特性而被人了解。

22. A large groundwater fed side channel of the Huma River just where that river meets the Heilongjiang River, was known by local residents as a major spawning area for chum salmon many years ago (1960's).

一个巨大的地下水供水的呼玛河的旁渠正处在河流和黑龙江交汇处，当地人熟知此处过去多年前为大马哈鱼主要的产卵场（1960 年左右）。

23. Chum salmon that spawn in the cold interior areas of the Heilongjiang River watershed, like the Huma River, choose their nest sites, by sensing where there are small upwelling flows of warmer water coming up from deep underground into the river through the stones at the bottom. These areas will not freeze solid during the cold winter so these areas are where the female salmon must put their eggs if they are to survive until spring.

在寒冷的内陆河流中产卵的大马哈鱼，例如呼玛河，通过感受从深处地下涌出到河床底部石头里的细小温暖水流选取他们筑巢场地。这些区域在严寒的冬季不会凝结成坚冰，所以这些区域是雌性大马哈鱼必须为了让鱼卵存货所必须放置鱼卵的地方。

24. China scientists are doing research in this large groundwater side channel of the Huma River, looking at chum salmon spawning requirements and working on a plan to restore the chum salmon of the Huma River.

中国的科学工作者在这个很大的地下水旁渠中进行研究，探寻大马哈鱼产卵需要条件并且按计划恢复呼玛河的大马哈鱼。

25. Mining of stones from rivers for construction of roads and concrete has destroyed large amounts of chum salmon spawning areas in the Suifen and Heilongjiang watersheds. Certain important chum salmon spawning streams need to be protected from further stone mining or there will be no chum spawning habitat left.

河床卵石的挖沙用于道路建设和混凝土制作已经摧毁了位于绥芬河和黑龙江流域的大量的大马哈鱼产卵场。某些特定的大马哈鱼产卵场必须不再进行更多的挖沙否则那里将不再会有任何的大马哈鱼生态环境留下。

26. Salmon spawning moves stones on the river bottom and when large numbers of salmon spawn in an area over a long period, then they can change the shape of the river bottom. River floods tends to smooth out the bottom of the river but spawning salmon move the stones in large piles, which are known as salmon “spawning dunes”. In some rivers these dunes can be seen by looking at satellite photos and will give researchers a good place to look for salmon. There are many such dune areas in the Huma River that suggest past extensive salmon spawning.

三文鱼产卵移动河床底部的石头，而且当大量三文鱼在该地区长时间产卵，它们可以改变河床底部的形状。河流的洪涝趋于将河流底部抹平，但是产卵的三文鱼移动的石头的巨大石堆叫做产卵沙丘。有些河流中，这些沙丘可以通过卫星图片看到并给于研究者预示着找寻三文鱼的好地方。众多的沙丘区域意味着呼玛河过去大量存在着产卵三文鱼。

27. Local residents know that the Huma River used to be a major spawning stream for chum salmon. The residents relied on these salmon for their winter food supplies in years past. Researchers believe there may be no chum salmon left in the Huma River, but some are asking for further research to see if any chum salmon remain. If some chum salmon do still exist in the Huma River, they would contain priceless genetic adaptations unique to the Huma River and that make them one of the longest migrating salmon populations anywhere in the world.

当地住民知道呼玛河曾经是主要的大马哈鱼产卵河流。是当地住民越冬的重要食物。研究者目前认为呼玛河上没有任何大马哈鱼残存，但是也有一些声音要求继续深入调查如果任何的大马哈鱼仍然存在。如果残存的大马哈鱼仍然在呼玛河上，他们将保有

价值连城的呼玛河基因适应性，使得他们成为世界上其他地方都找不到的最长洄游的三文鱼种群。